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August 2000

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By the time you read this I will have returned from my Mencap charity ride in China, along with my trusty A4 and a digital camera; in fact you'll be able to read all about it in the next issue. As I write this, my plane leaves in 12 hours.

The Chinese have a curse: 'May you live in interesting times'. Curiously it's not something I've ever considered to be a curse, in fact to live in uninteresting times would be the worst curse of all.

Interesting things are going on in our market right now. Some may see them as bad things but the bad things are gone; their results are becoming noticeable by being exposed to the light of day.

The fact is that RISC OS is standing at yet another crux, it's another 'up or down?' point in time. You will soon be asked to put yourself out for the computer platform that you have chosen for yourself. The platform that is British through and through, doesn't pander to idiots, and provides greater productivity than any other currently known.

There comes a time when you must take real action. While nobody is going to ask you to stand in the front rank of the advancing infantry, it can sometimes feel like that, when you stand up and say 'we've got something good' and the nay-sayers come crawling around, whining about how bad it all is really.

Well let's just remember: we *do* have something good. Something very good – new, fresh and interesting – and it's time to make it known to the rest of the world.

We live in interesting times, but it's not a curse, it's going to be fun. Join in and enjoy it!

Steve Turnbull
Editor

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26 Stockport Village, Hooper Street,
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Editor Steve Turnbull
Emergency Editorial Hologram David Matthewman
Production Consultant Alan Jones

Contributors
Mike Cook, David Dade, Alan Gibson, Richard Goodwin, Andrew Green, Richard Jane, Paul Johnson, Ben Levens, Jonathan Masters, Teri Paul, John Pettigrew, Jill Regan, Francis Richards, Pam Turnbull, Paul Vigay

Finance Manager Gary Duxbury
Distribution COMAG (01895) 444055
Deputy Managing Director Steve Turnbull
Managing Director Sharon Henderson

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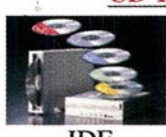
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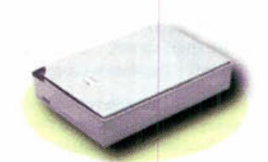
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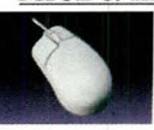
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Nuclear power?

Visitors to the Wakefield show in May could not have failed to notice the rather striking box on the Cerilica stand. No, it wasn't some kind of futuristic toaster, but the first machine to be designed specifically to house the eagerly-awaited Imago motherboard from Millipede – the Nucleus.

Apart from its striking looks, the Nucleus certainly packs a punch in terms of computing power, which looks set to place it firmly at the top of the RISC OS power stakes. However, the thinking behind it is based upon professional design and it's aimed firmly at the top-end specialist graphics market. Coming from the people who are bringing us *Vantage*, this already has an impressive pedigree.

According to Cerilica, Nucleus is 'over-engineered on purpose. It is designed to last'. Certainly in a potential market ruled by Macs, the Nucleus looks even more unconventional than the iMac.

Being focussed on one specific area and intended as a low-volume product allows the Nucleus to be designed and produced with unrivalled workmanship. This looks set to not only be a high-powered workstation but also a stylish status object – an important factor in its intended market of graphic designers and artistic executives; a world where plastic is taboo and anodised aluminium is cool.



Although the machine is not expected to be ready until the winter, the first concept drawings were started mid 1999. Indeed, all computer design has taken place using existing Risc PC equipment, mainly using *Vantage*, *Photodesk* and *WorraCAD*.

As you can see from the panel opposite, the proposed spec is certainly impressive, although this is subject to change before the final machine is ready. Indeed, Cerilica are keen to point out that the machine is very much customisable to the user's exact specifications, an Aston Martin of the RISC OS world.

It has been the design and technical specification that have driven the development of Nucleus, not the constraints of a budget. Therefore the price is expected to be around the £2000 mark, excluding a monitor, although obviously this will depend upon the price of the final Millipede board.

And you never know, at Wakefield 2001 you might even be able to walk away with one.

Cerilica
http://www.astutegrfx.demon.co.uk/cerilica/nucleus/





Provisional Nucleus specifications

Case

• Fully metal case: 4mm aluminium laser-profiled side panels, aluminium corner extrusions and steel internal dual chassis
• Approximate dimensions: 430mm x 430mm x 200mm
• Unique dual internal chassis allows for quick access to either motherboard and expansion podule cards or drives and power supply
• Three 5" drive bays (for CDs, DVDs, removable storage, etc.)
• Six 3" drive bays (for floppy drives, hard discs, etc.)
• Three further hard discs may be fitted internally
• Four EASI podule expansion slots
• 230W or 300W power AT supply (with switched monitor power output)
• Integrated screwdriver and allen key toolkit
• A big red 'self destruct' button on top to act as the off switch (will be aluminium in the production version).

Hardware

• Millipede Imago motherboard (very marketable, given Millipede's association with shows like *Who Wants to be a Millionaire?*)
• Intel StrongARM RISC processor with processor upgrade connector
• 128MB standard PC SDRAM (up to 512MB may be fitted) running at a minimum of 100MHz
• 16MB flash memory
• Video resolution up to 2048 x 1536 at 72Hz in 24-bit (16+ million) colours — monitor dependant.
• 100 Base-TX Ethernet
• Dual EIDE interface allowing four EIDE drives to be driven as standard with planned ultra DMA mode running at 32MB/s
• Serial port up to 460 KB/s
• Dual USB port
• PS/2 mouse
• PS/2 Cerilica Multi-Media Keyboard (MMK) includes music buttons, rotary volume/*Vantage* object control, hotkeys
• Game port with joystick and MIDI I/O
• Enhanced SoundBlaster™-compatible sound processing
• Audio/video expansion bus with four real-time video streams
• Standard podule bus with enhanced data rate
• Additional decoded podule connector
• Standard processor expansion connector for PC card (future potential software driver dependant)
• At the heart of the Imago lies an FGPA chip which may be programmed after manufacture allowing key software components to be programmed into hardware providing potentially great increases in performance — *Vantage* being the first application set to benefit, as one might expect.

Operating System

• RISC OS 4
• The OS is frugal on memory, and may be completely placed within Flash memory making it undeletable. It will never be necessary to reinstall the OS, and it consumes virtually no memory
• Software-loadable upgrades
• Highly efficient user interface with minimal intrusion on the design and publishing process
• May be networked to PCs and Macs
• Discs from PCs, Macs and Linux may be read and written to
• Internet access packages available (certain optional components at cost)
• Screen colour and resolutions may be altered quickly and easily without having to reboot
• Inbuilt PostScript output
• Direct enhanced printing to selected printer models
• System-wide on-screen font anti-aliasing for accurate and sharpest possible display down to very small font sizes

Peripherals

• 3" floppy drive
• CD drive (music output can be directly controlled by MMK)
• Large EIDE fast access hard disc

Software

• Basic RISC OS software bundle includes files editors, bitmap graphic import/export, pixel editor, vector graphic editor
• Cerilica will actively be seeking licences to bundle further software as standard, including a range of excellent freeware graphics utilities

In brief

Mico video card

MicroDigital have become the latest vendor to supply a new-generation video enhancement card for RISC OS machines. Their 'Lightning Video Card' follows hot on the heals of John Kortink's card, announced last month, and is designed specifically for their Mico computer.

Fitting on a MicroBus expansion card, it has been designed to remove the video processing bottleneck from the 7500FE processor – hence allowing it to run at full speed. The card will run resolutions up to 1600x1200 with 24-bit colour at 72Hz and the additional processor speed gain should boost the overall speed up to compete with StrongARM performance.

MicroDigital
(01274) 618774

RO4 users *en Guard*

The ARM Club has upgraded their popular *StrongGuard* software to become fully RISC OS 4 compatible. *StrongGuard* enables a lot of the old, non-StrongArm compatible games to be run on StrongARM-equipped Risc PCs.

Including a database of over 150 game titles, it should keep RISC OS 4-owning games players out of mischief for a long time.

The ARM Club
(07010) 709849
info@armclub.org.uk

Heading into Space

Many people may have spotted the small print on Spacetech adverts promoting their new satellite Internet service. Offering broadband Internet via satellite makes it far faster than either ISDN or modem connections. However, RISC OS users will have noticed that currently this service is only available to PC owners, due to the additional hardware and dedicated software required.

Spacetech are now working on a RISC OS solution, but this will very much depend upon the level of interest they receive. Although the hardware equipment required to receive the service costs around £350.00, you can obtain speeds up to the full 2Mbps.

Spacetech
(01305) 822753
sales@spacetech.co.uk



RISCOS Ltd: 'rumours of our death...'

There have been a lot of rumours flying around the Net recently concerning changes at RISCOS Ltd. One web site even went so far as to conclude that the company were effectively finished, and so too was any hope of development of RISC OS.

It is true that there have been recent staff movements at the company concerning software engineers. It's also true that the full picture of who will be working for which company cannot be stated at the time of writing, because it hasn't been finalised and so is subject to the usual legal and contractual restrictions.

Whatever happens though, this won't see the end of RISC OS. RISCOS Ltd are committed to continuing to develop the operating system, and to having a software engineering capability. This capability may be in-house, it may involve contractors, or it may utilise Pace employees, but it *will* exist.

'We are committed to meeting the continuing needs of the platform,' affirms Gareth J Dykes, Chairman of RISCOS Ltd. 'The RISC OS desktop market needs specialist knowledge, knowledge we have, and knowledge that Pace values. Contractually, the development of RISC OS desktop (and portable) machines is the preserve of RISCOS Ltd – Pace wish to develop RISC OS for other functions.

'Pace is very happy with this split and it makes practical sense, and is for the benefit of the platform, for the two companies to work together.'

What RISC OS Ltd *are* doing is branching out into other areas where they can be useful. Gareth sees one of the company's future roles in the market as that of promoting the RISC OS platform. Although the market is already an unusually co-operataive one, each company is inevitably going to be pushing their own corner. There is no one to speak for the platform as a whole, and this is a role that Gareth feels that RISCOS Ltd – who show no preference to any of their hardware partners over any other – could easily fill.

Such a role is desperately needed at the moment. Microsoft are floundering, not only because of their well-publicised troubles with the DoJ in America, but because people in education are increasingly concerned with the high cost of ownership of the Wintel platform. It's a good time for someone to be singing the praises of RISC OS in a number of selected niche markets, which is just what RISCOS Ltd intends.

Niche markets are very much RISCOS Ltd's target at the moment; the goal of 'a RISC OS computer in every home' is not a realistic one right now, although if the company are successful in niche markets, who knows where RISC OS might be in five years?

RISCOS Ltd are also looking to set up an 'expert consultancy network' made up of people with a great deal of experience in the RISC OS market. This network will act as a sort of 'think tank', where ideas and possible future projects can be aired.

'We're *not* casting around looking for ideas,' emphasises Gareth. 'We have some very clear plans, but we hope that the network will allow us both to refine and improve the ideas we have, and to carry the rest of the industry along with us. It's important that the industry pulls together.'

While that's hardly a new message, it's encouraging to hear it emphasised at this crucial time in the RISC OS market.

RISCOS Ltd
www.riscos.com

ArgoNet – Voyaging on with new projects

There are some interesting changes occurring at ArgoNet, the Internet provider who pride themselves as being one of the only ISPs in the country that can offer dedicated support for RISC OS users.

ArgoNet were initially established with an educational focus in schools where ArgoNet's Internet access software, *Voyager* for Acorn, has a reputation for ease-of-use. Today ArgoNet can offer solutions to your Internet requirements whether you just want to use RISC OS for dialup Internet access, or want to run your own virtual domain server.

From the 1 August until 31 August, ArgoNet are offering a special 'get online' pack consisting of the simple-to-use *Voyager* Internet suite which contains everything you need to get online with the minimum of fuss, and a full Internet connection for six months. With this you get five e-mail addresses and 20MB of web space. This whole pack is at the low cost of only £60.00 inc VAT (plus p&p).

What's more, to complement this offer, if you order a 'get online' pack plus an additional six months subscription you can get a **.co.uk** domain registration (subject to availability) absolutely free. A complete hosting service is also available.

As part of an ongoing series of new projects, ArgoNet are now offering web design services and a range of CGI scripts written to order. This means that RISC OS users can spice up their pages with guest books and other interactive content.

As well as web hosting, ArgoNet can now provide you with a dedicated Cobalt RaQ 3 server. Visitors to the Wakefield show may have seen a few of these being demonstrated on the ArgoNet stand and also on the Castle Technology stand.

These snazzy looking blue boxes can be configured to your exact specification and effectively setup as your very own e-commerce or virtual domain hosting server. The beauty of them is in the extremely low support and maintenance required. The whole server can be configured with only a few key presses.

ArgoNet
www.argonet.co.uk

Another Day at the Races

Preparations are well advanced for this year's RISC OS 2000 show to be held at last year's popular venue, the Queen's Stand, Epsom racecourse.

Organisers (the ARM Club, Surrey and Sussex Acorn User Group and RISC OS User Group of London) are fast building on the success of last year's well-attended inaugural show.

The show will run from 10 - 5 on Saturday and 10 - 4 on Sunday. Shuttle buses will run to and from the main Epsom station. Ticket prices will be £4 in advance, £5 on the door and will be valid for both days.

By early June, over twenty major exhibitors were already committed to attend. All the major players in the RISC OS market will be there including Castle, RiscStation, Spacetech, RISCOS Ltd and, of course, *Acorn User*. The RiscStation-sponsored small exhibitor village looks more popular than ever, with over half the stands already booked. Other sponsors are Spacetech and *Acorn User*.

For advance tickets write to RISCOS 2000, Merton Court, 38 Knoll Road, Sidcup, Kent, DA14 4QU.

RISC OS 2000
www.armclub.org.uk/shows/riscos/



Manchester meetings

In the past, MAUG (Manchester Acorn User Group) has been unable to advertise its meetings very far in advance because of room booking restrictions.

To solve the problem, the group has found an additional venue: The Bank at Sale pub in Sale town centre. MAUG has arranged a meeting every month to October – so Manchester-based readers should put the following dates in their diaries now:

- 26 July
- 16 August
- 20 September
- 18 October

The venue has free parking (Sainsbury's) and is within five minutes driving distance of the M60 (J7) and walking distance of the Metro (Sale).

In addition to the above dates there will be a special meeting on computer fraud on 12th July at the Manchester City Magistrates Training Room.

Manchester Acorn User Group
www.acorn.manchester.ac.uk
john@cartmell.demon.co.uk
0161-969-9820

Dream a Technodream for me...

Nevryon and *Technodream* are two of the best shoot-em-ups ever released for Acorn computers (it says here – actually, if memory serves, they were pretty good). ProAction, that haven for 'nostalgia' games, has now released a CD-ROM containing both programs, allowing gamers to delve into *Technodream* on their modern RISC OS 4 computers and re-live the nostalgia of *Nevryon* on the *65Em* emulator.

Also supplied are a small number of other shoot-em-up games, providing a good sample of what's available for RISC OS users.

The CD-ROM is available at £12.50 inclusive (please add £2.50 for non UK orders) from R-Comp Interactive, ProAction's distributors.

R-Comp Interactive
proaction@rcomp.co.uk
www.rcomp.co.uk
(01925) 755043

Aleph One will help you get Linuxed

You can't have missed the current hype surrounding Linux, which is being touted as the operating system that will topple Microsoft, but until now it's been rather complex to install on a RISC OS machine. ArmLinux has existed for several years, but because Linux is a complete new operating system it requires either its own dedicated hard disc or a partition on your existing one – which necessitates reformatting your drive and possibly much hair-pulling.

Enter Aleph One to the rescue. Aleph One have long been associated with running alternative operating systems on Acorn machines by manufacturing PC cards.

The company have now entered the Linux arena with the first easy solution for RISC OS users who wish to try out the world of Linux. They offer two solutions; one is just a copy of the usual ARMLinux distribution with RedHat installer on a bootable CD, for those who feel competent enough to do their own installation.

The second solution, and one which may prove more interesting to the newcomer, is to supply a new hard disc, pre-installed with ArmLinux, that you can just plug in and play with.

ArmLinux is now fully RISC OS 4 compliant and contains a newer version of RedHat than the previous ARMLinux, so if you want to see what all the hype has been about, now might be an ideal time to try it out.

Aleph One
(01223) 811679
info@aleph1.co.uk



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August 2000

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- **Extra ease of use**
  RISC OS has a reputation for having the world's most efficient desktop interface, and RISC OS 4 improves it still further with new desktop enhancements, improved stability and even greater user-friendliness
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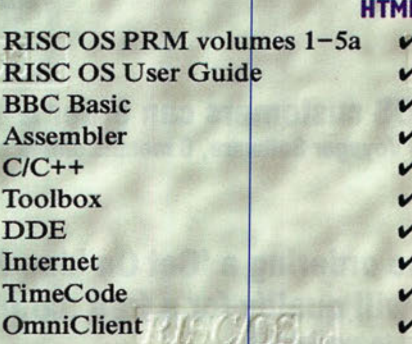
Schools: Schools may purchase an evaluation copy of RISC OS 4 for **£69 ex. VAT** *(strictly one unit per school; official purchase order required)*

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Readers' reactions to the first issue

"Well done on a BRILLIANT CD!!!"—*Chris Flynn* • "It's a really excellent job."—*David Pilling*
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sales@riscos.com

What will you support?

Ben Levens has his say

I love the Acorn market. The way that everyone loves RISC OS and goes out of their way to sustain the market. Ever purchasing the new upgrades to their favourite software, without even the blink of any eye, parting with £30 here, £60 there and a nice round £100 for an OS upgrade. However, all is not what it seems.

In the 'Industry Standard' market, people will do just as I have said, part with their cash without even considering the fact that maybe they don't need the latest upgrade, they want it. They don't need to be told, they know they must be as up to date as possible.

So why, in our ever-shrinking market, do we have people (some of whom are developers) complaining about the statement "Buy RISC OS 4, or say goodbye to the RISC OS market". The statement might not be 100% percent accurate but, it is true to say, if you don't buy RISC OS 4 you won't see a RISC OS 5.

Our software developers are just too willing to be overly nice, providing brilliant upgrade after brilliant upgrade for free, when it would almost certainly be a chargeable update in any other market. It's amazing at this rate that more developers don't go out of business.

One problem with the RISC OS market is the attitude of the market. People are willing to argue that because the computers last 5-10 (or more) years, they have no reason to upgrade it, and continue to use the machine, complaining of its speed and 'quirks' rather than progress to the next machine. Unfortunately, because of this attitude, which I believe killed off the Workstation division of Acorn, people are not going to buy the latest RISC OS machine, they are going to jump ship.

If they had made the plunge earlier to a Risc PC from their ever trusted A310, Acorn would have sold more machines and ended up putting more money into future projects (Phoebe, for example).

And what was the problem with Phoebe? Alright, it might not have been as technically advanced as it could have been, but what is a company supposed to do when all of its trusted clients complain. They really have two choices, either loose another £2m pounds in R&D trying to make things better (with no guarantee that people will like it after that), or simply say, "Game Over, sorry, no more". There are too many people willing to complain about relatively pointless aspects of a product: "I don't like the yellow box".



However, one very good thing has come out of the darkness. Instead of there being just one company developing RISC OS-based computers there are now four, each with its own goal and planned future developments. This is probably the best thing to happen to the RISC OS market since the Risc PC reared its head in 1994.

This new 'team' of hardware developers should be able to do nothing but improve our bleak-looking future. With developments in the pipeline including the PCI enabled RiscStation, the two portables (from RiscStation and Microdigital) as well as the ViewFinder graphics card (showing that AGP *can* be used in a Risc PC) the outlook should be rosy.

So why are so many people unsure about the future, surely this amount of work can't fail, can it? I would say no, but many people in the newsgroups would disagree with me. How many of you out there love the market, but spend all of your spare time complaining about it publicly? A better idea would be to support the company that you are complaining about and get something done, a polite request for a fix is much better than starting a war in cyberspace, trying to push the company into submission.

If people who have been with the market for years don't have any faith in it, what sort of future can we expect? The only way to keep it alive is to embrace it with open arms, not waiting and waiting for the 17th upgrade, buy each upgrade in turn, support the developers, support the hardware manufacturers and most of all, support RISC OS 4.

Without continued support toward our operating system there is no way that we will end up with a 32bit OS, VIDC/IOMD dependency, and all the rest. It might cost a bit more in the long term, but just think how good our software would be if we all supported each other.

And consider just one more thing: If you don't like the hardware; or the software; or the magazines. Just don't buy them, go away and buy Windows. No one is forcing you to use either, we all have a choice.

Stop complaining, and start doing. RISC OS: where would you like our market to go today?

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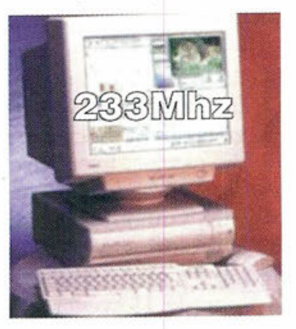


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A string of Perls

In the late 1980s, Larry Wall produced a high-level programming language he called Practical Extraction and Report Language, or Perl. Perl's heritage comes from tools and languages including the C programming language and Unix. Its process, file and text string manipulation functions make Perl ideal for database access, network administration tasks and World Wide Web programming.

Perl was conceived as an open source language, and has been continuously developed by both Larry Wall and a band of volunteers called the Perl Porters. There is a version ported by the RISC OS maintainer Nicholas Clark: *Perl* version 5.005_03 can be downloaded from his Web site at **www.flirble.org/~nick/P/**

Perl can be used to program Common Gateway Interface (CGI) functions which run on a Web server to present and process data both before and after it appears on the Web page. Even a simple e-mail response form uses a Perl script often supplied ready-made by the ISP.

Such is the power of Perl scripts that many ISPs only allow their Web space users to call pre-configured CGI scripts whose code can't be accessed directly.

Commercial customers' Webspaces and some ISP home page servers do allow user-designed cgi scripts though, or you can install *Perl* and a cgi-supporting Web server (such as *NetPlex* reviewed in this issue) on a RISC OS computer to develop Perl scripts. The flexibility of Perl programming is such that its motto is "there's more than one way to do it", or TMTOWTDI, usually pronounced "Tim Toady".

To find out more about the language and maybe receive some Perls of wisdom, you can join the RISC OS Perl mailing list by sending an e-mail to riscos-subscribe@perl.org. Other Perl resources and information can be found on Web sites such as **www.perlmonth.com** and the Perl Mongers site at **www.perl.org**

Its in the new's again

Grammatical gripes have been aired again in the newsgroups, triggered by articles in recent issues of this venerable organ itself. Electronic publishing and author self-proof-reading are almost certainly responsible for recent lapses in grammar and punctuation, and it's well known that the apostrophe can easily lose its way as a result.

The official *Acorn User* position has been stated thus: "Grammar rules were invented after the fact of language. It's a conceit to assume that the rules are superior. The whole point is communication. If communication is occurring smoothly and without misunderstanding then if a rule is broken, is it important?

"However we would not use that view to excuse errors in *Acorn User* as common rules for language construction make communication easier."

Typographical errors, errors in print whether accidental or through misuse of standard grammar, do indeed cause breaks in smooth communication and understanding. This is because the reader's eye and brain register a discontinuity in the expected flow of patterns. This interrupts the 'mind's eye' comprehension of the text which we normally manage to do without the need to actually parse the words individually. We are subconsciously using the 'rules' without realising it.

There are learned treatises to consult for other opinions: Sir Ernest Gowers 'The Complete Plain Words' (HMSO), or should that be Gowers', (or even Gowers's?) has been guiding scholars though the English language for over 30 years. H.W Fowler's 'Dictionary of Modern English' (Oxford University Press) first published in 1926, has also been used for making definitive judgements of English usage.

You might also enjoy the humour and tongue-in-cheek banter of the newsgroup **alt.possessive.its.has.no.apostrophe** – yes it really does exist.

In brief

Get the Frax

Frax is a classified index of free and chargeable software for RISC OS. You can either browse the categories or use the search engine to locate programs on offer, which are given a star rating from visitors' comments and votes on quality. Contributors wishing to publicise software they have created, found useful, or just think warrants promotion are required to open an account for submissions. This allows on-line maintenance of entries, and qualifies the contributor to appear in the membership list which includes many well-known RISC OS software writers.

www.frax.co.uk

Can't FTP? Want FTPc

If you've bought Castle Technology's Oregano Web Browser or downloaded the demo version you'll need a separate FTP program for maintaining your Web site, and Colin Granville's freeware program FTPc is certainly king of the castle, receiving praise from all quarters.

Colin offers excellent support with frequent updates, and has recently moved the FTPc Web site to a more permanent home at **www.ftpc.iconbar.com**

On the Iconbar

Those guys at Acorn Arcade have been busy creating a new RISC OS Web site which involves the reader interactively. The Icon Bar is a smartly designed site to be a major source of information and resources, and features interactive comment on each page.

They hope it will complement other sites such as Drobe and the forthcoming www.riscos.net and www.riscos.org sites. It will be interesting to see if the RISC OS community can sustain all these new resources in cooperation, or will it be competition?

www.iconbar.com



Contacting me

David Dade:
comms@acornuser.com



Easier document clipping

One of the biggest benefits and thus pleasures of using RISC OS is it's unrivalled drag and drop capability. However one often over-looked additional feature is the 'global clipboard'. This works a bit like the cut and paste on that rival operating system that we don't talk about, but is generally more flexible and user-friendly.

Put simply, most modern applications allow you to cut (or copy) a selected area and store this in a globally accessible memory location so that you can paste the data into another compliant application.

This makes it a doddle to be writing something in an application such as *Easiwriter* or *Ovation Pro* and transfer data straight into either another editor or in fact any other application that imports the relevant data you have cut – such as Castle's new web browser *Oregano*.

Unlike the global clipboard on other systems the RISC OS one isn't controlled by the operating system it is a communication protocol between applications. This is good because it achieves a far better level functionality than the rivals; but the downside is that programmers have to actively implement quite a bit of additional code – assuming they even know the protocol exists – and many applications, including the Wimp itself, don't use it. Which is why you can't cut and paste writable icon text.

Assuming you do use applications that have it, the system works in a way that is completely invisible to the user. While this makes it intuitive and easy to use, if you make heavy use of cutting and pasting you might be excused for forgetting which bit of data is available at any instant.

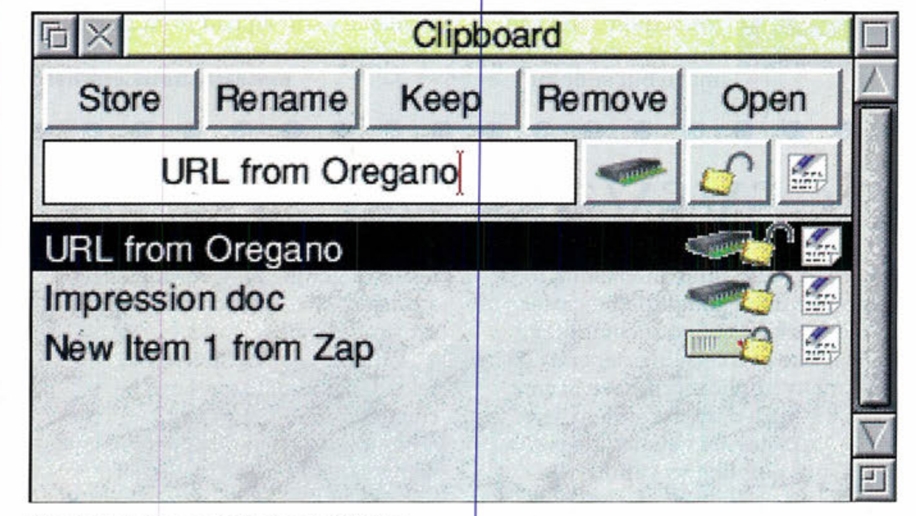
This is where *ClipMan* comes in. The author, Mark Daniel of Mad Cow Software obviously wanted to make control of the global clipboard that little more flexible for frequent users. Put simply it constantly stores the contents of the global clipboard, giving it a convenient name to label it. Once ClipMan has made a note of your last cut you can opt to store it for this session or indeed keep it for future sessions at a later date.

Each entry can be renamed, removed or 'launched', as if you'd double-clicked on it. This means that you can cut several selections from different applications, *ClipMan* will manage them all for you and then allow you to choose which particular selection is used to paste into your destination application.

As can be seen from the screenshot, there are a number of other options available. Each selection can be RAM- or disc-based and can be locked to keep on disc until told otherwise. Lastly, a third icon tells you what type of file the stored selection is.

One benefit of *ClipMan*, even to users of applications which don't support Acorn's global clipboard protocol, is the ability to drag an item from ClipMan into the required application using the normal RISC OS drag and drop. Now that's what I call real drag and drop control.

ClipMan can be downloaded from the Mad Cow Software Web site at **www.madsoft.freeserve.co.uk/soft.htm**



Lots of clever options available from the ClipMan

Behold the AntiWord

AntiWord will be ideal for all users who want to view those annoying Microsoft *Word* files that we occasionally receive via e-mail and don't want to invest in a full blown word processor application such as *Easiwriter* just to decode the odd attachment. Simply load *AntiWord* and drag a Microsoft *Word* document to it. It will then display the contents of the document in its own window.

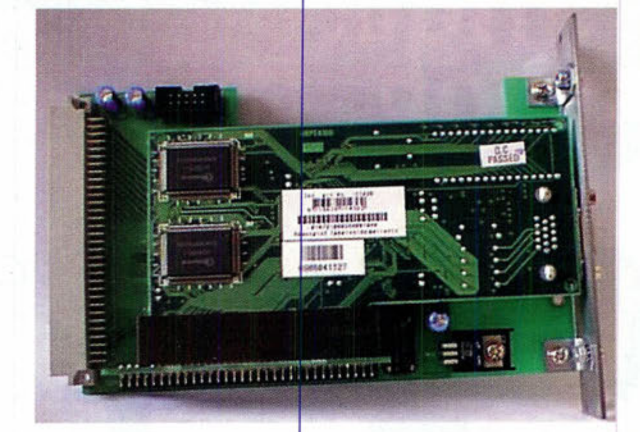
From here you have three options; Firstly you can scale the image should you wish to make it easier to view, especially if small fonts have been used. The two remaining options allow you to save the document either as a Draw file or as plain text.

It doesn't work on every Word file but it's actively supported by the author Adri van Os and I'm sure new versions will be more frequent if he receives feedback. *AntiWord* can be downloaded from:

www.winfield.demon.nl/index.html

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ViewFinder offers more than just higher desktop resolutions; there is hardware acceleration of a number of common graphics operations, normally performed entirely in software by RISC OS.

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ViewFinder has currently been tested on RISC OS 4.02, 3.70 and 3.60, Kinetic, StrongARM and ARM710

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RISC OS: The Search for Sophie

It all started quite some time ago in the hallowed halls of *comp.sys.acorn .misc*: the suggestion that RISC OS ought to have a mascot. You could blame Linux, whose cuddly penguin, Tux, has graced the pages of the past few months' *Acorn Users*. Tux has caught on in a big way, serving both as a logo for the Operating System and a banner under which supporters of the open source movement stand.

For advocates and users of RISC OS, the Acorn nut symbol has become inappropriate, a signpost to the past. The RISC OS 4 cube, although well-designed, is a signal only of a single version of the operating system; it does not indicate any sense of the culture within the (ex)-Acorn community.

And then someone suggested a squirrel. A red squirrel. The symbolism behind the idea is quite evident: red squirrels, although native to Europe, are slowly being endangered by the growing population of grey squirrels, to the extent that it's become uncommon to see red squirrels around now, despite being near-ubiquitous in the past.

The martyrdom that oozes from the idea isn't entirely justified, however. Red squirrels are only endangered in the UK: the rest of Europe hasn't seen anywhere near the population decline that Britain has, and RISC OS isn't limited in appeal only to the British Isles. But the squirrel's passion for nuts, hoarding acorns for the winter, is reason enough to sell the idea.

The red squirrel – Tufty reincarnated with geek pride – wasn't the only idea to emerge. A strong second contender was the polar bear (our esteemed editor's preference, as it happens). Somehow, the image of Fox's Glacier Mints was hard to shake for some, and the association with penguins just a little too strong to avoid accusations of "bandwagoneering" and the idea has only surfaced in passing since.

Steve Ottens' squirrel

Usenet being what it is, names for the mascot were a subsidiary subject of discussion, with a noticeable swing towards Sophie – in honour of Sophie Wilson, guru at Acorn and deity to those who remember just how impressive the BBC Micro and Archimedes were in their time.

Paul Vigay registered the domain *red-squirrel.com*, in anticipation of the foothold the mascot might achieve, but the discussion died down and Sophie was all but forgotten for a few months. Then Matthew Sackman posted what amounted to a rallying cry for anyone in the community.

Matthew's idea was to launch a comprehensive web site targeted not simply at people already involved with RISC OS, but instead at those who hadn't heard of it. The site would not be an advocacy rant, but a clear and thorough explanation of the philosophy behind, and technical details of, RISC OS, together with a wealth of background information and support for those already using the platform.

This thread, *Here and Now*, rekindled interest in the idea of a strong graphical identity for the platform as a whole, one which didn't depend too greatly on the past that was Acorn, or any single company involved now. Sophie made a comeback. Usenet being what it is (again), slogans for the new identity were also a subject of discussion, with the idea emerging (again from Matthew) that a range of slogans could be used, with the site randomly choosing one from the list whenever a page was generated.

Matthew started a mailing list for those interested in the development of the site, *riscos.org* (again, kindly registered by Paul Vigay), and Matthew's own page dedicated to the growing impetus of the idea began to feature a few mascots and site layout designs which had been submitted by contributors to the discussion.

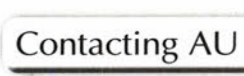
The Ottens brothers, quick off the mark with superbly crafted designs, submitted different interpretations of the red squirrel theme (a design from each of them is represented here), with others contributing simple *riscos.org* logos, or variations on the mascot idea (one, memorably, managing to achieve cuteness from an image of a cow and her cud).

A poll was arranged through *egroups.com*, the hosts of the mailing list, for votes to take place on which of the submitted mascots/logos and page design templates was the best, or at least most appropriate for the *riscos.org* site. At the time of writing, the results of the poll have not been announced, but the poll isn't necessarily the final arbiter of the design to be used.

The finished mascot may not even be a squirrel, or be called Sophie, but it seems clear that a mascot for RISC OS (even if only in the form of a logo for *riscos.org*), is an idea that won't go away.

RISC OS
the intuitive operating system

Maarten Ottens squirrel



Andrew Green:
graphics@acornuser.com

Netting the be

Richard Goodwin casts a professional eye over a newly released Web server

So you've coded up some cunning Web pages with all the latest bells and whistles, and now you want to try them out. What do you do? If you're like me you probably have to dial up your ISP, send your files off to some remote server and then either stay online as you make changes or continually drop the connection, makes changes, dial up, upload the files and drop the line again. Costly and painful. Wouldn't it be great if you could set up a Web server in your own home or workplace?

Enter *Netplex* or rather, *Netplex 2.00*, the new commercial version of a shareware program. For your money you get two 800K floppies (as an academic exercise I tried to get the software running on my ancient 4MB A310, but couldn't) - this includes the server itself, *SysLog* the logging utility, *PHP3* and *SSI* interpreters, and the Perl programming language.

Let's get one thing straight from the outset – if you want to set up an ISP and host Web sites, *Netplex* isn't going to be enough. RISC OS is a great desktop operating system, but it's not designed to handle the kind of pressures a fully-fledged Web server would have to put on it. According to Netcraft (**www.netcraft.com**) Apache is the server software used for 60% of the Web sites around the world, and most of them will be running on some variant of the Unix operating system (Linux, *BSD, Solaris and so on); this is not without good reason, Unix is just plain better at this job.

As an aside, one of the world's biggest search engines, Altavista, installed some Microsoft NT servers as a trial – and got rid of them in a week, the software just isn't up to the job.

To their credit Warm Silence Software acknowledge this, and are targeting *Netplex* at two main areas: the RISC OS-based Web designer who wants to test his or her sites without running up a huge 'phone bill; and schools where pupils can construct their sites without the cost and effort of going "live" straight away. To this end it's a fairly straight Web server – no fancy extras like multiple virtual domains here – but it is easy to set up, and with the Perl/SSI/PHP combination makes for a potentially powerful tool.

Having built my own Linux box to run Apache to host test sites on in the past, I have to say it's not the approach for the faint-hearted to take; the learning curve is steep, especially if you want all the extras, just to test a few pages. *Netplex*, on the other hand, has the usual RISC OS drag-and-drop approach – after installation just drop the directory containing your Web pages to the Choices window and that's pretty much it.

Plus, of course, you don't have to go to the expense of buying another machine, networking gear and so on – it just sits on your iconbar and allows you to fetch pages from **http://localhost/**, or if you want to fetch pages using another machine on the same network you can without having to dedicate your machine to just this one task.

However, using *Netplex* is not all plain sailing – having a fair collection of Web sites on my hard drive, I tried to get them running under Netplex and found problems with most of the ones which tried to do anything more complex than straight HTML pages and images.

The main problem was that the version of Perl included in the package is out of date – a 1995 vintage, it doesn't have support for RISC OS to Unix filename conversion. I'd have had to have re-written all my scripts to use the RISC OS-style of filenaming which goes against the whole idea of testing scripts offline before uploading them to a real server. It also lacked some pretty standard modules, for instance trying to use CGI, IO::File and IO::Sockets threw up errors.

Luckily I had a 1998 version of Perl already installed on my hard drive which I'd had the foresight to move out of the way before installing the version that came with *Netplex*, and found that this worked okay. However, *Netplex* doesn't appear to set up (or pass on) some of the standard environment variables that you need to get the most out of Perl CGIs, even with the "Set additional UNIX-style CGI variables" option switched on.

Let's say you want to serve a simple HTML file if the user is using *ArcWeb*, more complicated HTML using lots of tables if they're using something more modern, or inflict lots of cascading style sheet commands on PC users; usually you'd use:

```
$browser=$ENV{HTTP_USER_AGENT}
```

in Perl but *Netplex* doesn't do this. Without knowing the location on the disc that the program is running from, you can't work out where to find other resources (such as $DOCUMENT_ROOT when you want to include files in PHP-parsed

Netplex Status
Connection from bourbon.biscuit.org.uk:5693 on socket 3
GET /images/background.gif HTTP/1.1

Figure I:

st results

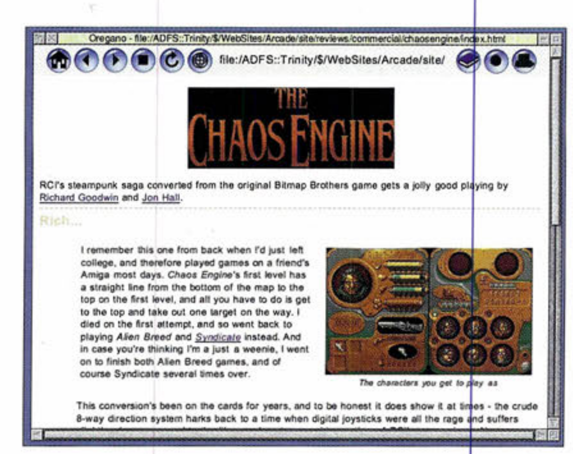


Figure IIa: A page without SSI switched on

pages). Even passing parameters in the URL seemed to leave me with undefined variables.

In Figure III (over the page), both pages show the output from a script that lists all the environment variables passed on by the server; the left page shows *Netplex*'s output, and the right page shows the exact same script uploaded to an Apache server. Apache not only passes on more data, it also allowed the script to see that I was using *Oregano* and so could use fully featured HTML, including colours.

Having used SSI commands for some time on most of my sites, I was keen to see how well this worked. SSI – Server Side Includes – allows you to do things like include the contents of another file, which means you can design a single header file and with just one command at the start of each page on your site have the same header on all pages. Want to change the colour of every page on a large Web site? Simply alter the header file and all the pages on your site instantly follow suit.

You can even include the output from a program, so within a page that sets up the standard layout for your site you can have information that changes every time you visit the page – for instance, a program that goes away and fetches the latest weather report. You can also add other tricks like give the time and date that a file was last updated – never again will you have to remember to change that "this page last updated on..." section on your Web site, SSI will get the server to do it for you.

The first thing that I had to do was set the filetype of my files to SHTML (&144) so that Netplex recognised them as needing attention; this does mean however that other programs might have problems, for instance double-clicking on the file won't send it straight to a web browser so you can check the fixed HTML parts of the file, you have to remember to go through the server every time. *StrongEd* guessed that the file needed editing in HTML mode, but other editors might not be so lucky – for instance, if you write Web pages using a DTP package you'd probably need to change the filetype back. These are not major problems, and neither is the exclusion of #if/#elif/#else and so on – this is a complex side of SSI that few people use.

However, I always use the "#include virtual" method of including headers and footers into pages, which is supposed to point the server to files relative to the current page; *Netplex* didn't get rid of the name of the current page when working this out though, so the instruction

```
<!-#include virtual=
"ssi/header.html" ->
```

did not find the file:

```
ADFS::Trinity.$.Webpages.
ssi.header/html
```

It was trying to locate:

```
ADFS::Trinity.$.Webpages.
index/htmlssi.header/html
```

I had to go through my pages and change these commands to go to /ssi/header.html, which negates the point of using this labour saving device somewhat. This could so easily be fixed, but one that needs to be made before I can reliably use SSI in the same way as I do under Apache, given that I have 250 pages using this method in just one of my sites alone.

In Figure IIa (left), the page has not been interpreted by an SSI parser; in Figure IIb (below) the same page has been parsed and the standard Acorn Arcade look and feel has been added to the page with just one command.

PHP is similar to SSI in that it adds new commands to boost your HTML, but is almost as powerful as Perl – starting out as someone's Personal Home Page project it now goes by the self-referencing name of "PHP: Hypertext Processor". Not being a whizz at this particular language I used some pages written by a friend (Tim Fountain of **iconbar.com**) and got more of the same.

After filetyping the files appropriately the lack of support for the $DOCUMENT_ROOT variable meant I had to manually set the current directory to the Web site directory to enable the PHP parser to find included files, and some methods (such as the "virtual include" that's supposed to make transition between writing SSI and PHP easier) weren't supported, so the pages didn't render much past the header of the page. Admittedly it's some pretty complicated PHP I



Figure IIb: The same page but with SSI

Figure III: Comparing the environment variables between NetPlex and Apache

fed it, but I expected a little more.

Finally on issues of compatibility with real-life servers there are some other, minor issue to bear in mind – for instance, pretty much any file can be interpreted by SSI, and the same goes for PHP – you could in fact mix and match, having lots of files ending in .html (/html under RISC OS) in the same directory which use PHP, SSI and straight HTML almost at random. This is because you can simply use the RISC OS-filetype facility to say, for instance, this is a PHP file no matter what the extension in the filename is.

This is great for running *Netplex* as an Intranet server, but "real" servers such as Apache have to look at the file's extension; generally .html files are left alone, .shtml files are parsed for SSI content, and .php3 files are sent to the PHP application. While you can get Apache to use different extensions with a little persuasion, such as getting it to parse all .html files for SSI, you can't get it to do both SSI and PHP on the same extension in the same directory, so pages that succeed in *Netplex* might fail in the real world unless you are properly disciplined.

You can also have programs anywhere on the site – not just in a cgi-bin directory, and in strange languages such as BBC BASIC, which again is a great help when running the server to serve pages to your local network but would be highly unlikely to succeed if you uploaded the pages to a "proper" server.

There are even other worries such as RISC OS having a case-insensitive filing system and Unix being case sensitive; perhaps an option for a strict mode would help when testing?

A quick trip to the ANS filebase came up with a copy of Netplex (albeit a much earlier version), the PHP interpreter, and a later version of Perl (I didn't look for SysLog, but it should be available from the DoggySoft site); given that all of this is out there on the 'Net, as well as other Web servers such as Stewart Brodie's HTTPServer and the one built into DeltaNet, and that Warm Silence's upgrade policy is to charge a small fee for discs and not send upgrades by email, why bother to pay for this collection?

Hopefully the answer will be development – some of the problems I've pointed out are major stopping points to using the current version as a testing rig, but many of them seem like quite minor fixes from a programming point of view, bugs or omissions that appear to have crept in due to tight deadlines before the Wakefield show.

Just a little more work and this product has real potential, not just as a testing setup but perhaps also for serving Intranet pages within schools or small companies, especially where there's a mixture of machine types so resources can't simply be fetched using ShareFS. With the ability to run BASIC and other RISC OS native programs, it's an inexpensive way to do quite complicated things like maintain a fileserver or reboot remote machines.

ShareFS allows you to change the contents and locations of files, but not actually run programs on other machines, and while there are less graceful ways of doing this (Justin Fletcher's BCTD springing to mind as a useful but limited telnet-style server), someone with little programming knowledge can write programs with a nice front end (i.e. Web pages) without having to learn Wimp or comms programming.

Conclusion

I feel that I – as a professional Web site designer – have spent most of this review moaning about the shortcomings of *Netplex* when there are points to recommend it. It's an easy to set up, low cost, Web server without the need to have a dedicated server machine, and there's some decent HTML help files.

You can even do some complicated stuff like redirect to a different page depending on server responses – perhaps go to a funky error page instead of displaying the standard "Not found" message. I think it's because I see so much potential that has just been let down in this version by some obvious bugs/omissions in what is now a commercial product, not a shareware hobby.

If Warm Silence Software were to reverse their upgrade policy and send out an e-mail with upgrades to all registered users (like R-Comp do with products like *Webster XL*), or even just have password-protected FTP or Web space to keep upgrades on, I'd be a happier bunny because I would know that fixes would be forthcoming without having to keep paying for updates, however little the amount.

Anyway it's more likely that *Netplex* will get a good buff and polish much sooner than all of us will get Internet access at a decent speed, so I think it's worth keeping an eye out for this one, even if you're not tempted to jump in and buy it straight away.

END

Product details

Product:	Netplex
Price:	£35 plus VAT
Supplier:	Warm Silence Software, PO Box 28, Woodstock, Oxon, OX20 1XX
Tel:	01608 737172/0585 487642
Fax:	01608 737172
E-mail:	info@wss.co.uk
Web:	www.wss.co.uk



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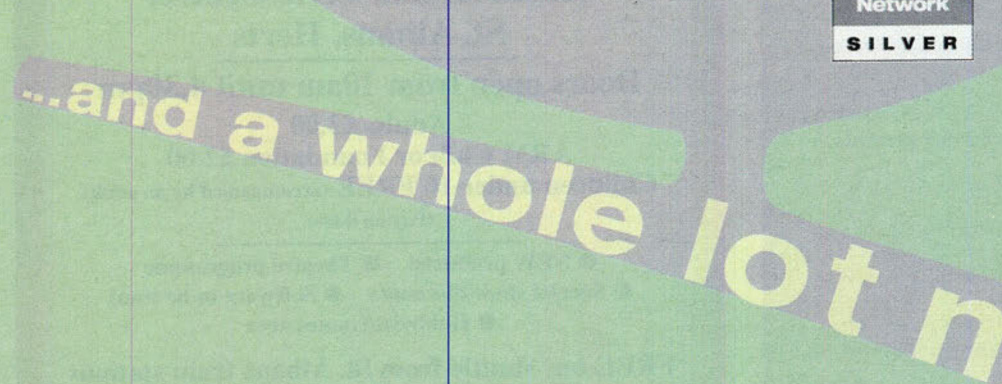




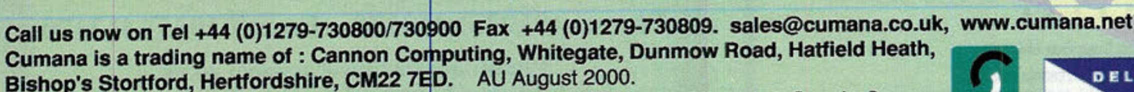




















Surfing made even easier

Francis Richards gets more from his Web browsing

For all that their marketing was a disaster, Acorn's software designers were (and still are, though now in different jobs) excellent. One of their bright ideas was the plug-in protocol for Web browsers. The idea being that, rather than hard-wiring the ability to deal with any new Web standard into the browser (Java being a case in point) a separate program would implement the standard and could be "plugged into" the browser automatically.

Hence the browser could stay relatively simple and plug-ins could come from anywhere. In addition applications other than browsers can also implement the plug-in protocol, for example *TechWriter* can have Java on a page.

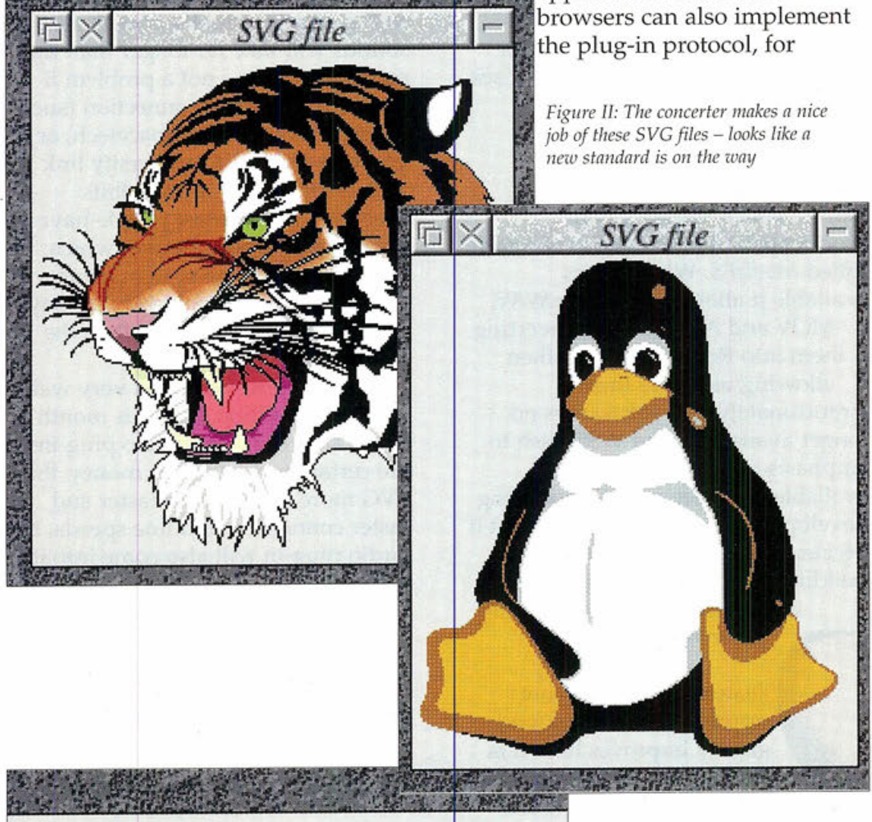


Figure II: The concerter makes a nice job of these SVG files – looks like a new standard is on the way

Figure I: SVG to Draw converter among some old friends

All the major RISC OS Web browsers use the plug-in protocol and we had hoped for a deluge of third-party plug-ins to work with them, however only *DrawPlug* from Justin Fletcher (allowing your browser to display Draw files) appeared. Until now.

Like public transport, we see nothing for ages then three come at once. In this case, we have the *SVG* and *Sound* plug-in software from Warm Silence Software and also Leo Smiers *Flash* plug-in (not reviewed here).

SVG – a monitor type?

SVG is a scalable vector graphic format which is just coming onto the scene and until recently was only available for *Netscape* browsers as a plug-in (Microsoft again not realising the potential – something, like the Internet, they were slow to take up). SVG is very similar to our own *Draw* graphic format – they've finally caught up.

They are compact, the picture quality is far better than GIFs; can be scaled to any size without loss of definition; and, unlike JPEGs, the quality is not reduced for compactness. Better still though is that the plug in has a fine pedigree behind it – Justin again, working wonders.

I've visited plenty of Physics and Maths Web sites which have decided

Figure III: Load your new drawfile into your favourite app

to use the SVG format over the traditional formats. When I have e-mailed them over why they've used this format, all replied that it was down to the scalability and overall quality of the format.

To use the SVG plug-in, it just needs to have been seen by the Filer to let the browser find it. Stick it in Boot:Resources, as with Java.

However it doesn't end there, *SVG* is a complete application and will load on to the iconbar. You can drag any SVG file on to it and the program will pop it up in a window, from where you can export it, as a drawfile, to any other application.

It's possible that not all the bugs are ironed out yet because we did find that the resultant files were tiny. However, as this is a vector format which means that you can just scale it up to normal size – just don't be surprised at the blob sitting in the bottom lefthand corner.

The illustrations here show several SVG files all originated on other platforms and rendered on RISC OS machines.

In fact the story doesn't stop there, because along with my latest version of *SVG* I was also given a new Draw to SVG converter, currently it's only a beta command line program but it is getting there.

Interestingly enough our familiarity with using vector graphics means that the RISC OS-based sites are likely to proliferate with excellent (compact) graphics, and it'll take those other sites quite a time to catch up. bearing in mind that any Web site that takes longer than 10 seconds to load usually loses its customer it gives us a lot of potential.



Figure IV: SVG to Draw to Artworks to Illustrator...

Make a noise!

Warm Silence Software had a product prior to the demise of Acorn called *MovieFS*. When it was available it allowed us to use WAV, MOV and AVI files by converting them into Replay files and then allowing us to use them. Unfortunately, this software is no longer available – and WSS wish to emphasise that it really isn't available anymore and it's not being developed so don't call them about it because you won't get it. However, building on this technology, WSS have brought us a sound plug in for Web browsing.

Like so many features of the Internet, appropriate use of sound greatly improves how it is viewed (I recall visiting a Dr Who Web site which would play the theme and, using some clever JavaScript, would play the sound of the Tardis dematerialising when you clicked on a link). These small things made visiting that Web site a must for me.



Figure V: Picasso rendered rather well

The major drawback of sound on the Web is bandwidth. Sound (as .wav files) take up a whole load of space (a file may be greater than 10Mb to play a 60 second sound) and so the time to actually download the sounds will take far longer than the sound plays for – not a problem if you've a mega-fast connection (such as the one offered by Spacetech, or if you've a direct UK university link with a speed of near to 4Mbits /second), but as most people have only around a 56K modem which, with the UK phone system being under the strain it currently is, may only drag in roughly half that, the actual online use is limited.

It does, however, work very well when used offline. (Try this month's *Acorn User CD*). These two plug-ins are certainly worth their money, the SVG more so, but with faster and faster connection and line speeds, the audio plug-in will also come into its own.

END

Product details

Product:	SVG and Sound plug-ins
Price:	£10 each
Supplier:	Warm Silence Software, PO Box 28, Woodstock, Oxfordshire, OX20 1XX
Tel:	(+44/0) 1608 737172
or:	(+44/0) 1585 487642
Web:	www.wss.co.uk
E-mail:	info@wss.co.uk

It's good to talk

John Pettigrew says more

In my previous article (a few months back now) I talked about how to set up a mailing list on the Internet. These are very useful for discussing things with a group of friends but, if the group becomes too large or the messages too numerous, or if the people are spread widely round the world, it may be difficult to keep such a group going. In this case, you might want to create a newsgroup (yes, you really can) but how do you go about it?

This article gives a 'bare-bones' outline of how to create a major newsgroup; that is, a group belonging to one of the 'big-8' top-level hierarchies: comp, humanities, misc, news, rec, sci, soc and talk. These are the most widely available sets of newsgroups but there are others, including:

• national groups such as uk.* for the United Kingdom, de.* for Germany and aus.* for Australia;
• specialist groups such as biz.* for business and commercial discussion;
• the ubiquitous alt.* groups which can cover absolutely anything and usually do.

All new newsgroups, regardless of type, are created by sending a Newsgroup Control Message, which asks all newsserver administrators everywhere to create the new group. Depending on the hierarchy and who sent the message, servers can create the group automatically, pass the message on to a human administrator or reject it automatically. This is because most hierarchies have, by general agreement or custom, an 'official' source of control messages for that hierarchy.

Request for Discussion

The first thing to do is to submit a formal proposal (a Request for Discussion or RFD) to the moderator of the group news.announce.newgroups, who will then post it to that group, to news.groups and to other newsgroups that have an interest. The proposal is then discussed for at least three weeks in news.groups.

You may need to revise and resubmit the RFD for another round of discussion or two before it is acceptable to the majority of people. The RFD should contain a charter for the group (what the group will be for) as well as the reasons for creating it. It shouldn't talk about the history of the topic that the group will address; you can give an outline in a separate article during the discussion if you want.

Call for Votes

Once the discussion is complete, the Usenet Volunteer Votetakers will appoint a neutral votetaker, who will post the Call for Votes (CFV) and conduct the vote. This is more properly called an 'interest poll', because it is judging whether there is sufficient interest to justify a group.

The CFV will be posted to news.announce.newgroups and any other groups that the original RFD was posted to. The CFV will also specify the voting period, which will be between 21 and 31 days. It will also tell people how to cast a vote, usually by sending an email with a clear, unambiguous vote message such as 'I vote for the group foo.bar as proposed' or 'I vote against the group foo.bar as proposed'.

Results of the vote

At the end of the voting period, the votetaker will post the results of the vote to news.announce. newgroups and the other groups to which the CFV was posted, including the e-mail addresses of the votes received (to allow votes to be verified). After this, there is an obligatory five-day waiting period. This gives everyone the opportunity to challenge any errors in the voter list or voting procedure

Creating the group

For a group to be created, the vote has to fulfil certain conditions: there must be at least 100 more valid 'Yes' votes than 'No' votes, and at least two-thirds of the total votes must have been in favour of creating the group. Also, there must be no critical objections during the waiting period.

If the proposal passes, a newsgroup control message can be sent out. If it does not pass, the group cannot be created and you must wait at least six months before you can start all over again with a new RFD. If you still fail after a couple of tries, it's best to bow to the will of the majority.

Creating newsgroups is not terribly complicated but is rather tedious. If you want to do it, lurk on news.groups for a while to get a feel for the sorts of comments people make on proposals before submitting your own. Also, try reading some of the guides listed and elsewhere on the Net. As with everything it really does pay to do your research.

END

Guidelines: The Big Eight Newsgroup Creation Process
www.eyrie.org/~eagle/faqs/big-eight.html

How to Format and Submit a New Group Proposal
web.presby.edu/~jtbell/usenet/newgroup/how-submit.faq

The beginners guide to creating new alt.* groups
usenet.cjb.net

UK Usenet Homepages
www.usenet.org.uk

Creating an alt.* group

You post a suggestion to alt.config with your justifications. Listen to the suggestions and advice offered there and make any appropriate changes. When there are no significant objections, you can either post the newsgroups control message yourself or ask someone in alt.config to do it for you.

There is no official source of control messages in the alt hierarchy. However, if you try to create a group against significant objections, someone will probably post an remove group control message, so server administrators to remove a group. As with mainstream groups, read alt.config for a while before making your suggestion.

What's on the

Paul Johnson reveals all

Broadly speaking, I like cover CDs, I really do. However, from time to time comments are made concerning aspects of the CD that makes me wonder if they aren't more trouble than they're worth.

Common ones are:

• Why don't we have everything archived?
• Why don't we have everything *un*archived?
• Why can't I get the HTML front end (and web sites) to work?
• Why is the layout illogical?

Archive or not?

The question of whether or not to archive software on a cover CD is a vexing one. There are arguments for and against, so satisfying everyone's needs is awkward.

On an 800K disc it used to be necessary to archive simply to squeeze those last few precious bytes out of the disc. That's not often an issue on a cover CD, which isn't usually full enough for space to be a problem, although it may mean that there isn't room for the obvious solution; to offer both an archived and an unarchived version of the same software.

Archives are also useful for preserving the case of filenames, and for including any characters that the ISO9660 format can't cope with. Having all the filenames in upper case isn't really much of a hardship and, if it bothers you that much, Warm Silence Software's excellent *CDROMFS* can be used to translate all the filenames to the correct case. However, some programs use file names that don't translate to the ISO9660 character set (names with exclamation marks that aren't the first character are common culprits) and these either have to be archived or re-written for the CD.

Why is archiving a problem? Well, if you want to run the program, you either have to unarchive it by copying it to your hard drive, or you have to run it direct from the archive by using *ArcFS* or *SparkFS* (*SparkPlug* or *Spark* won't do it). Unarchiving is a hassle, and running direct from an archive can be unreliable and eat up memory.

However, because some of you asked for it, I've added an extra directory called *Archived*. Here you will find all the programs neatly wrapped up, with a copy of *Spark* from David Pilling to help you to un-archive them.

Incidentally, on the AU CD 9 from the May 2000 issue, having all the software as archives would have shaved 100Mb off the final disc image size, although space constraints on that disc would have meant that we wouldn't have been able to include the unarchived programs as well. In the end, it was decided to do away with the archives for that issue.

HTML reading

If you have an up-to-date *!Boot* structure (by which I mean the one supplied with RISC OS 3.6 and above or the one on the AU CD 8) the read-only version of *Fresco* supplied on the CD will work fine. Prior to that, you will be missing the internet bits and pieces.

If you go to the *Internet* directory on the CD, you will find a *!Boot* application. If you are having problems, merge this with your current one and all should be well, but *do not* merge this with your current *!Boot* if you can already use the Internet or if the read-only *Fresco* already works – it will upset your system.

Illogical layouts

'Logic, my dear Zoe, merely allows one to be wrong with authority.' – Dr Who.

People who complain that the layout on the CD is 'illogical' rarely expand on this statement. I assume that they think that it's so obvious what they mean that they don't have to point it out. People who *do* suggest alternative layouts always suggest ones that are logical when looked at from a particular viewpoint, but which would be incredibly confusing to me when I'm trying to find something on the disc.

That's the crux of the matter, of course. Whether or not you think a layout is 'logical' depends on whether or not you can slot the disc on the CD-ROM drive, open the root directory, and quickly find what you want. It is impossible to design a CD layout that will do this for everyone reading the CD, so the best that can be done is to design one that's internally consistent.

I've looked back at all the past AU CDs and they look 'logical' to me. Games are in the *Games* directory, software updates in the *Updates* directory and company/individual web sites are in the *Websites* directory. There are other ways of organising the information on the CD, of course, but it shouldn't be too hard to find what you're looking for on this layout. Should it?

On this CD

The tenth *Acorn User* CD-ROM has been designed to the 'Gamer's Paradise' disc. After a large amount of negotiation, cajoling and generally hassling until I'm blue in the face, this CD has no less than 19 ex-commercial (and one currently commercial) titles from the likes of Krisalis and Gremlin.

Put together, you're looking at around £500 worth of software. There is a broad range of games on the CD, with platformers (*Lemmings 2*, *Mad Professor Mariarty* & *Zool*), racing games (*BurnOut*), space invaders (*Xenon 2*) and sports games (*Premier Manager* and *Quest for Gold*) in amongst them. *Acorn User* is also

CD?

proud to have permission to include the classic *Karma - The Flight Trainer*. This is not the demo version, it is the full blown game.

Warning: while these games (contained in the *Karma* and *Ex-Commercial* directories) have been given over to *Acorn User* for the cover CD 10, they are still commercial applications and, as such, you are not permitted to make copies (other than to your hard drive) or transmit them electronically without the prior permission of the companies concerned. Any breach of this may result in prosecution by either Tau Press or the companies involved. You have been warned.

All the software here works under RISC OS 4 and StrongARM thanks to the tireless work of Alex Macfarlane Smith who has written the patches. If a game needs patching, the directory will have a patch in it (in a directory called *Patch*) which you need to merge with the original; we can't pre-merge them ourselves for licensing reasons.

Also on the CD are tonnes and tonnes of adventures and adventure writing software (*GTAC*, *Inform 6.1* and *Trellis*, the latter being another commercial package). If you enjoy using your mind rather than your fingers, then these will be for you.

Warm Silence Software being generous bods have allowed us to include demo versions of *Z80Em* and *6502Em* (the Spectrum and BBC emulators). Even better than that, we have the BBC Lives archives here as well.

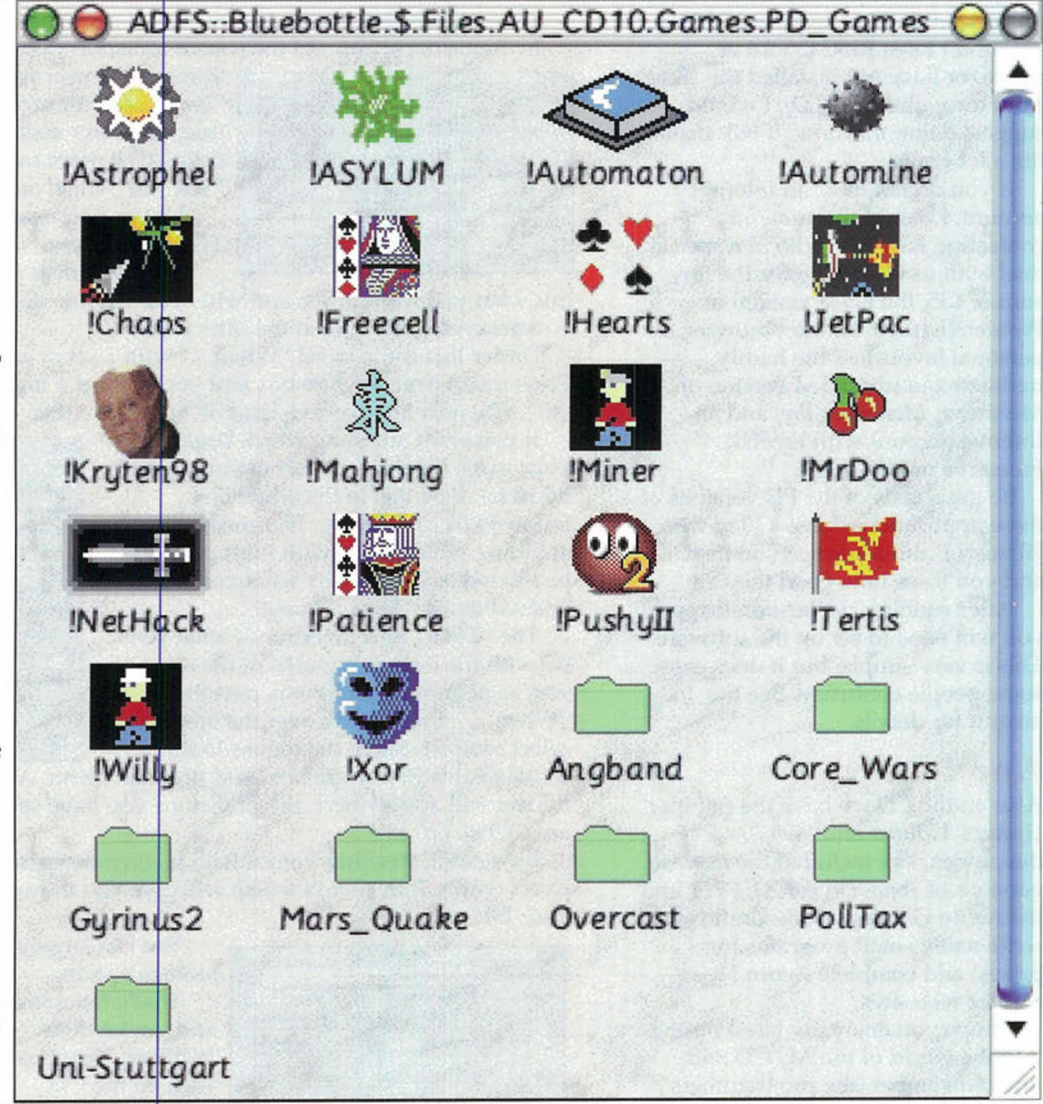
As previewed elsewhere, we have an exclusive demo version of the mega game, *Overload* from Paradise Software. Play this and buy the full game; you'll not go wrong.

Finally, we have a large collection of PD Games. By 'large', I mean it's a shade under 40Mb and includes the dungeons and dragons style game, *Angband* (with plenty of other flavours of the same game as well). I've added in a selection from the University of Stuttgart's ftp server for good measure (the full version of which is available of the China CDs - see the advert for more details).

Enough of the games, what else have we got this time?

Big brother

It's survey time again. Held inside the *Acorn_User* directory, you'll find the survey program. Please take the time to complete the survey and then either e-mail us the answers or send



A selection of PD games is included on the CD.

them in on a disc. The results are important to us, and are used to shape the future direction of the magazine, so your answers really can make a difference.

Also in the *Acorn_User* directory are the files which were either missing or corrupted from the clip-art and font directories on the last CD. Better late than never, as they say.

Getting wired

Speaking of being influenced by the survey data, it became apparent on the last survey how many of you have Internet access.

To that end, we have decided to include the very best of the public domain world on the CD with an easy to use installer (which must be run from the CD). If you do not have an up-to-date *!Boot* sequence (that is, you don't have RISC OS 3.6 or above, or have not installed the *!Boot* from the eighth AU CD), I would suggest doing this now; it will make life a lot easier.

If you do not have an Internet account, I would recommend contacting R-Comp, who in a special deal with us is offering for the tiny sum of £55, the latest version of *WebsterXL* (their Internet browser, a personal favourite), the highly updated and upgraded version of *Messenger*, *Messenger Pro*, and an Internet account with FreeUK, Freeserve or UKOnline.

To get a taste of the PD versions of these applications, have a play with *WebsterLT* and *Messenger* on the CD, and you'll see how good they are.

After running the *Int-install* app, you will need to set up the software. This is very simple, but it does cause some people confusion. See the boxout for details.

And finally...

Also on the CD we have the popular *Updates*, *Utilities* and *Websites* directories. I've included the newest versions of *Amp*, *DigitalCD*, *FTPc* and the Acorn Gaming, Code Craft (who write really small programs for prizes) and complete Acorn News Service web sites.

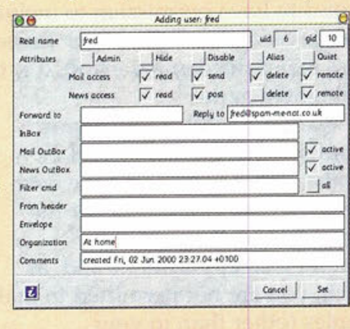
I hope you enjoy my latest outing into the world of the AU CD and until November (the programmers' resource CD), enjoy!

Setting up the software

First, open the *Internet* directory which has been created for you. Double-click on *NewsBase* to run it, then click on the *NewsBase* icon with the Menu mouse button (middle one). Select Setup.

Your choice of ISP (Internet Service Provider) will determine what you put in the hostname setup. No matter which ISP you are using, fill something in the Organization and tick the Lock to system tick box. Click Save when done.

The local users field is where you get to define who is using the software. It comes with a number of users already set up for you (which can usually be ignored). To add a user, click on Add. A new user window appears (left); type the user name here. When you click on OK, the user window appears. Fill in the "Reply to" box with your e-mail address, ensure the Mail Outbox, News Outbox and Filter cmd tick boxes are all ticked and you have something in the Organization text boxes.



When happy, click on Set. This closes the window.

If you're the only user, change all the mail settings (in the lower half of the window) to the user name you've just set up. When happy, click on Save.

In Transport set-up, set the source transport (top part of the window) and Transport (lower part of the window) to "local", default mail route to POPStar and select the new mail and new news selection boxes. The news route should be set as "internal". Click on Save.

Unless you need them, ignore the TCP/IP services.

In News/mail filters, you get to strain out what you want to see and what you want to dispose of.

Select Add and type in the filter name.

Under this is the word "When...." with a set of empty boxes next to it. Press menu over the first box and you will get a myriad of options. Select "to". The next box has a default of "=". Leave this.

If you want anything which begins with your name (or the first part of your e-mail address), type this in the white box followed by an asterisk. This means that anything which starts with (say) paul will be filtered as directed by what you have entered in the "Then...." area.

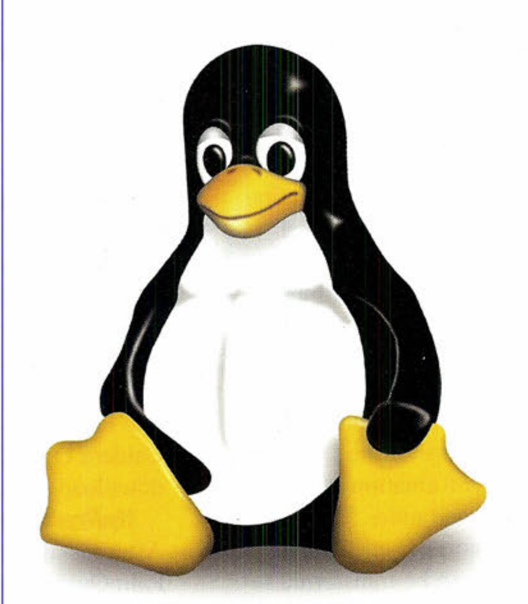
The "Then" area determines what you do with the e-mail. It works in the same was as defining the first box past the "When....". Press menu over the box and select redirect. Move the mouse to the writable area (the white box) and press on menu. All the available e-mail folders will appear here. Select the one you have set up in the "Local Users" area. Click on save.

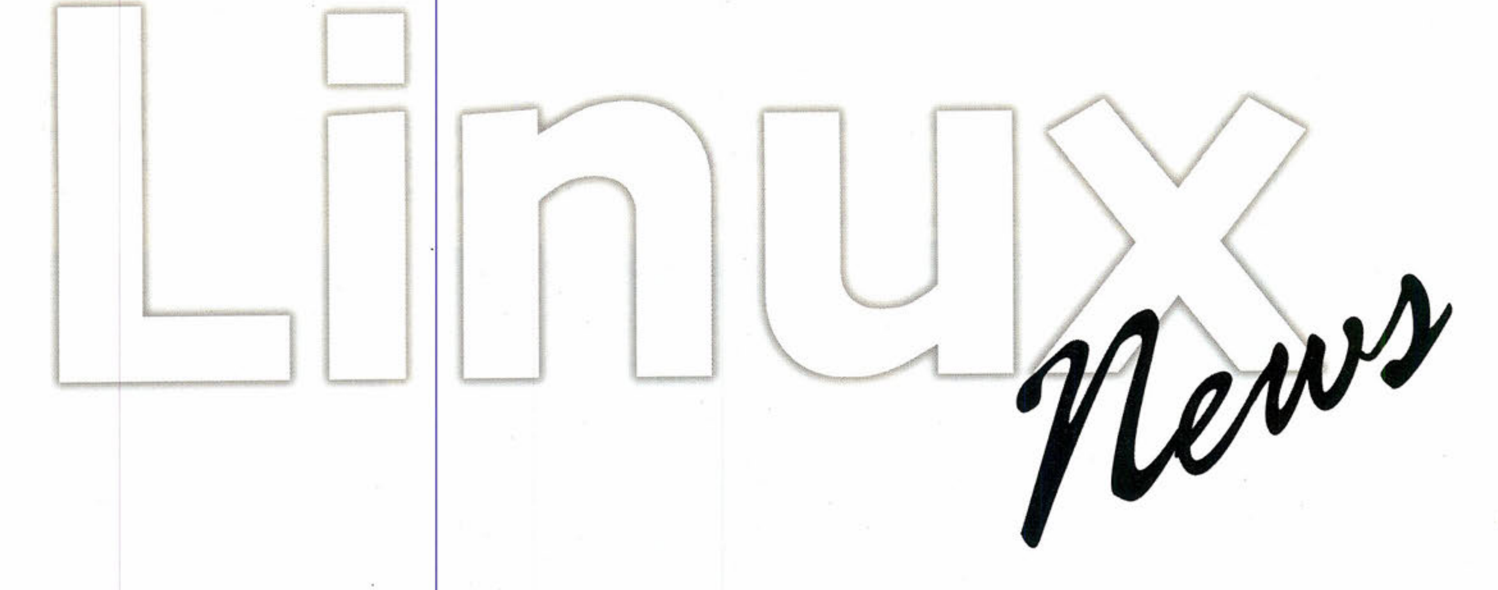
By default, *Newsbase* comes with its own newsgroup and nothing else. Don't worry. Run *Groups* which will give you the available newsgroups from your ISP.

You can largely ignore the Mail & news storage options.

That's *NewsBase* set up, just click on Save and you're done. Setting up *Messenger*, *POPStar*, *NewsHound* and *Socketeer* is dealt with on the CD.

Linux News ● Linux News ● Linux News ● Linux News ● Linux News





● Linux News ● Linux at home ● Myth II



ISSUE 5 AUGUST 2000

Linux pilot

In cooperation with envi.con the LinuxTag organization presents an easy-to-use guide for the conference and expo LinuxTag in Stuttgart, Germany.

With all necessary information about the exhibition and the conference schedule the most popular handheld Palm Pilot organizer and compatibles is supported.

The electronic guide provides an index of all exhibitors with detailed information, a schedule of free talks and business congress notes, maps of the exhibition ground and the booths, information of services, travel facilities at the fair and more. The information system allows to add notes to each single exhibitor and talk entry. The dates can be transferred to the Palm Pilot calendar and all entries can be a assigned to different categories.

During the event envi.con presents a Linux-driven upload server, with which the visitors can transfer the information software automatically to their device. Eight and more Palm Pilot devices can be served at one time.

The guide software also can be downloaded for free from the Internet. It will be updated regularly until the event starts. The download link is:

www.envicon.de/e/palmguide/

To be able to transfer the files on a Linux machine to Palm Pilot devices, you need to install pilot-link, a package of Palm Pilot to Unix transfer utilities. You can find the package at all major Linux distribution sites like Red Hat Linux, SuSE Linux, Debian Linux, Caldera Open Linux and so on. If not, you can download it from:

ftp://ryeham.ee.ryerson.ca/pub/PalmOS

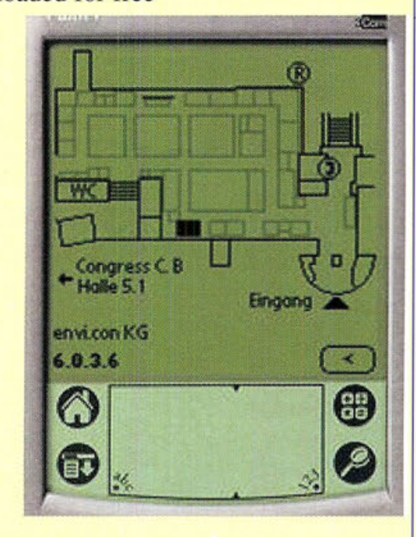
After installation you can upload the LinuxTag PalmGuide files to your Palm Pilot by simply typing:

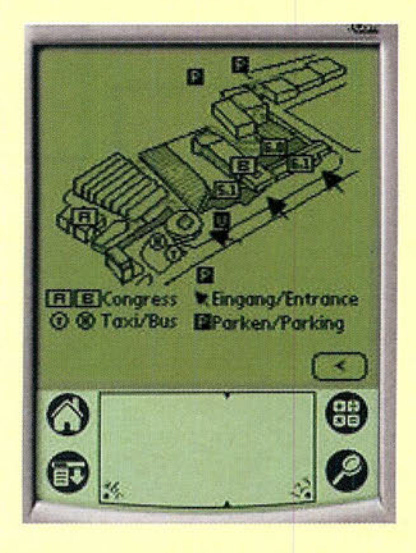
```
pilot-xfer -i linuxtag.prc
linuxtagdb.pdb linuxtagvdb.pdb
```

and pressing the HotSync button on the device.

After the transfer you will see LinuxTag as a new application on Palm Pilot. Tap on the logo and you can browse the overview. If you tap on an entry you will see some more details.







Mandrake rooting for expansion

MandrakeSoft, the publisher of the popular Mandrake distribution of the Linux operating system, today announced the formation of a strategic alliance with Taiwanese motherboard manufacture, Pro Team Computer Corp.

As a result of this alliance, Pro Team Computer Corp. will bundle and ship the Linux-Mandrake OS free with its AZZA motherboards beginning in the third quarter of this year. Pro Team Computer expects to ship approximately 720,000 boards per year with Linux-Mandrake, mostly to the North American and Asian markets.

MandrakeSoft's Linux-Mandrake is considered to be one of the most user-friendly and powerful Linux distribution available today. It provides an excellent way for beginners to get started with Linux, yet still provides all the power and features required by experienced users.



SuSE goes large

Well okay, SuSE already is large – having 7% of the US market is big, really big and they have plans to go even further afield by releasing a fully engineered version of Linux for the Apple PowerPC, the IBM RS 6000 and Motorola PReP.

Said Dirk Hohndel, CTO of SuSE AG in Germany: "Customers have asked us to provide SuSE Linux on platforms other than x86. We added a version for the Alpha last year; PowerPC and the IBM S/390 were added this year. Other platforms will follow according to demand. Having SuSE Linux available on several platforms makes it easier for companies that are using a heterogeneous hardware environment to reduce administration costs.

"SuSE Linux is going to be available for the S/390 later this year. But all these projects are triggered by the same reasons – customers' demand for Linux on other platforms. Linux is now the only commercially viable OS that is available on the majority of today's hardware platforms. No other software environment can offer this benefit." He continued: "We are committed to furthering SuSE Linux on all the platforms we support. Demand from our customer base helps us prioritize which platforms to add. The user profile of each platform is similar. Business users are looking for a reliable solution for their data center needs, and technically interested home users prefer a reliable, UNIX-type OS for their work.

"SuSE is available on multiple platforms: IBM S/390, IBM Netfinity running FailSafe, the Sun Ultra Sparc Server, the SGI Origin 2200 Server, Intel, Alpha, PowerPC, Arekia back-up solutions on Oracle, and Siemens 870 Primergies," Hohndel said.

With the new Macintosh distribution you can start MacOS from Linux and change from one to the other. Standard PCI hardware is supported.

With bucks for eyeballs the SuSE people noted the level of interest at Mac World 2000 and developed the more extensive PowerPC version: It has firewall scripts, Web servers, mail programs, video editors and the GIMP.

Barn doors (and bolted horses)

While most companies are beefing up their IT staff to combat increasingly vicious worms and viruses, most are leaving the end users out of the loop.

During the past month there have been a host of VBS worms released. The worms have ranged from fairly mild to down right devastating. These new methods of tricking users into opening attachments highlight the need for up-to-date computer training for end users. With the right training these types of attacks would have much effect.

In fact, about ninety percent of all computer problems occur because the end user has made a bad decision. Be it an accidentally opened file, the careless deletion of a file, or the installation of a poorly written software package, the end user is ultimately the culprit.

I have found that most companies with an IT staff are willing to spend a good deal of money in keeping their IT personnel up to speed, but give little regard to the people actually using the systems. It is absolutely essential that end users receive at least basic computer and computer security training. In many cases the IT staff should be able to handle giving a one hour "quickie" training course. If not, there are a variety of companies that provide just this type of service.

Some topics to cover may include:

- Email attachments (when to open, and when NOT to open)
- Basic file types
- Telephone Security (how to prevent social engineering)
- Password security
- Logging off (some users may never log off the network)

The employees maintaining the network can go to great lengths to firewall, packet filter, and monitor the network. However, if an end user circumnavigates the precautionary measures setup, then none of that means squat. (**www.HeavySecurity.com**)



Linux at home

We've heard it all before, the computer in the home revolutionising the way we live our lives and so on and infinitum. Even in the 1950's – when they exaggerated a rate of development that was a mere fraction of what we have now – the computerised household was only a few years ago. Well it's happening again and I don't want to appear cynical but, well, I'll believe it when I see it.

Having said that I think the proposition from Adomo seems reasonable, for a change. They have taken a good hard look at what might actually be needed for a computerised home and come up with existing technologies that could fill that need: a set of different (and configurable) units that fill genuine needs. Filling real needs is crucial, it's far to easy to invent a solution that's in need of a problem.

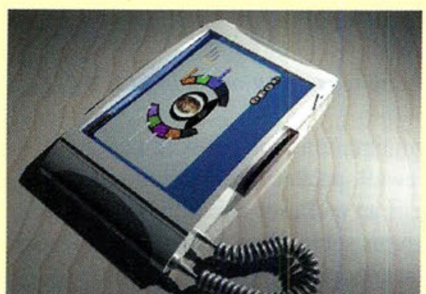
So let's see, if you wanted an intra-home computer system what would you want it to be? First let' have a not-want, we don't want to have the house hardwired with network plugs in every room.

It's unsightly as you have to remodel your walls; it's expensive apart from the raw cost of wiring there's the potential need for re-decorating; it needs experts, okay, yes, us geeky types could probably do it ourselves but we're looking at consumer goods here; it's restrictive, once it's in you can't move it the computer goes where you put it or else it has to trail wires; and so on.

But that's a point: wires, trailing or otherwise, who needs them? Adomo bypassed the whole thing by declaring that they would have a wireless network. That's the first set of objections dealt with, and it means you can add or subtract units without any hassle.

Not only that but those units are essentially dumb, all the hard work is done by the dedicated unit in the cellar – or the lounge, it doesn't matter because this unit looks like a household appliance, in fact it looks like something out of the 50's. Looks like we've come full circle.

What we have are a set of remote, dumb terminals linked to a central server by the wireless network.



Adomo's approach can be summed up in three little words: keep it thin.

"As thin as possible", says Adomo CEO Samir Lehaff.



"We don't believe in having one general purpose platform that performs everything. Ideally, we'd like to have 'one button' dedicated devices distributed throughout the home."

By keeping the appliances simple they are smaller; cheaper to build; generate less heat; and run longer on a battery charge. In addition, having the application software run on a central server instead of on the appliance has some important advantages. Since the appliance is just an interface to the server, all the appliances can be used interchangeably. Just sign on and pick up where you left off.

The only purpose of the appliance is to handle the input/output functions of the device. Each appliance runs a special small-footprint version of X Windows. All application programs execute on the server, and only display output (graphics, sound) and user input (keyboard/mouse, sound) travels back and forth between the server and client devices.

The central server must be powerful enough to handle the activities of all the client devices located throughout the home. In addition, the wireless network needs sufficient bandwidth to carry all the associated data transfers. Adomo claims the performance of their server device will support between four and eight "typical" family members (what's one of those I wonder), all using the system at once.

Interesting idea, but the fact remains that expenditure rises to meet resources so maybe their system will handle four family members at once – one wonders what the system degradation will be like if the demands on the system exceed its performance.

Video games are out, according to Adomo vice president of business development, Marc Prioleau. "In that case," says Prioleau, "you should plan to add a conventional PC to the system or, better yet, a specialized game machine." Many homes a;ready have computers and the Adomo system provides an excellent opportunity to add a major league server to your existing home network – with the server providing connectivity, application sharing, file storage, and backup for all the devices.

And, as it runs Linux, it will be solid as a rock; provide excellent protection against outside hack-attack



– no mention is made of using it as a printer server but that's a given ... isn't it?

What problem?

I want music in the room I'm in – more accurately I want *my* music collection wherever I happen to be in the house. Currently we have three CD players, two are computer systems, and the other is a general one in the lounge. So if I want to listen to Bjork in the bath (where else) I'm stymied.

Must be a common problem because Adomo have their *AdomoTune* MP3 "outlet" that plays digital music from the server itself or from the Internet. Rather than give it integral speakers, it just acts as the portal to the server and plays through whatever equipment you have to hand. personally I think they'd have been better off making it a real player – less to cart around.

Naturally you can use the AdomoTune to select your playlist before setting it in going. Future options might include re-broadcasting Internet radio, then I could listen to a web-cast of the Archers while discussing the latest script in an apartment in LA.

That's a product I understand and can really go for, but since this system is designed to be a connection to the Internet you have to have a Web browser, and this comes in the form of the AdomoPad. Does your average family really browse the Web? I don't know any average families – and all the ones I know, do.

So obviously the 'Pad is an essential appliance, what we have here is a battery-operated, wireless, touchscreen pad that integrates a web browser and a telephone. The user can sit on the couch or roam around the house while checking e-mail, browsing the Web, or looking at digital photos. Cool, now there's a reason to own a digital camera beyond wanting to put family pictures on your Web site.

At your server

The server is basically a high-end PC running Linux. But Adomo has made the effort to make their server look more at home with the family. It looks like a storage box – which it more or less is. Though frankly I'd still prefer to put it somewhere out of the way, obviously the kitchen is a bad place – too much humidity. Under the stairs is an option, the loft probably suffers from too much temperature variation, hm, well I'm sure it would fit somewhere.

There's a motherboard based on an AMD mobile K6 processor. Adomo opted for a design that reduces power consumption and heat dissipation, compared in order to lessen the need for noisy fans and also to improve overall system reliability. Which is a frightening comment on how appallingly unreliable PC systems are – even when running something as nice as Linux. One wonders whether it was a cost-cutting exercise or just plain ignorance that prevented them choosing hardware that's more reliable.

Unsurprisingly you can add a monitor and keyboard and use it like a desktop system – with all the same programs available to the client devices.

Winging it

The first product to come out with the server is the general-purpose and nifty-looking Wing; connect it to a monitor, keyboard and mouse to make a PC. Connect it up to speakers, and it becomes a wireless music system.

Inside there's a 90 MHz Motorola Coldfire system-on-chip processor; VGA video controller (1024 x 768 pixels); connections for infrared keyboard/mouse, PS/2 mouse, microphone, and speakers.

The wireless LAN interface is just a standard PCMCIA card that plugs into the system other wireless technologies, or straight Ethernet, could be used.

Giving voice

Voice control is another holy grail of home systems that's been predicted for 50 years, maybe it's a throwback to the rural way of life when man's living servants were perfectly capable of following simple voice instructions – we've wanted the machines to do the same ever since.

The use of voice control is perfectly reasonable for home system though, we shout at the dogs, the kids and the TV – now we can have a something to shout at that will actually here us and do what we want ... perhaps.

Naturally the units don't process the voice, it's reduced in bandwidth (as in a phone channel) and passed across the network to the server. The ease of use makes it a price worth paying.

Product launch for the Adomo equipment is October 2000, they have the technology, they have the money, we'll now see whether they have the right idea. It would be nice for someone to get it right at last. Oh and as a final comment, Adomo are making the system open, so third party add-ons are a realistic option. That gives it an even better chance of success.



Mythology

Myth2 is the much awaited sequel to the original *Myth* game - which was itself heralded as a revolution in gameplay when it first hit the stores a couple of years ago. The sequel is set in the same time period although 60 years have passed since the 'Great War'. Alric (the heroic leader) is now the King in Madrigal and the armies have returned home.

During the course of the previous episode we saw the fall of Balor – the evil sorcerer with more than unhealthy obsession with the undead – however as everyone knows, things are never quite as simple as they seem where evil forces are concerned...

It turns out that one of Balor's evil minions survived the war and was freed from Balor's powerful magic. Soulblighter has been waiting ever since that time, slowly building up a powerful force of undead deranged zombies hard bent on doing his ghastly work.

In the game you play a warrior under the leadership of Cruniac, a brave commander, ever loyal to the King. The idea of the game is not a new concept; Bungie instead decided to enhance their last instalment with many flexible features and extensive character and map designs that produce a well-built, familiar whole. The guys at Loki are responsible for porting the game to Linux for all of penguinkind to enjoy.

Getting started

The game arrives in a nice, flashy box complete with flip cover, many screenshots, and even a penguin sticker. Inside you will find the manual and CD-ROM along with a very handy quick reference card.

To install the game, follow the instructions in the getting started section of the manual – making sure to log in as the root user before you proceed. While you have the manual open, have a browse; it's well constructed and will really help you to get a feel for the whole genre. The default installation options will be fine and the game will be installed in */usr/local/games* – if you're using a graphical environment such as KDE or GNOME, be sure to create a handy link.

At this point you will have a functioning game, so load it up.

Getting a feel for it

The game is extremely flexible and allows you to choose between single and multi-player modes; either standalone, over your LAN or the Internet.

I would seriously suggest that your first point of call is the practice level – it will give you a feel for the numerous controls at your disposal as well as the behaviour of your troops and their special features.

When you feel ready to take on Soulblighter, choose the new game option. The first time around you will only be able to play 'Willow Creek'; however, as you conquer more levels in single or multi-player mode, you will be able to select from them at this point.

One of the nice features is the diary entry that your character reads at the beginning of each level to tell you your mission objectives and to help you to get into the spirit that is a big part of playing *Myth*.

Through playing the game, you quickly discover the elaborate detail that the creators have gone to and just how complex the world of *Myth* really is. Your troops exhibit a certain amount of AI and will really help you form a strategic attack on the unsuspecting enemy. They will learn to become better soldiers with use and survivors from multiple battles will have veteran status; be sure to hang on to these troops, they are usually much better than the rest and should not be sacrificed readily.

Your weapons will damage pretty much anything you fire them at, right down to being able to kill both the peasants and wildlife as well as inflicting serious damage on the surroundings. This is not your regular 'shoot 'em up' Quake-like game and you will quickly learn that strategy is as much a part of the game as the fighting itself – much like in real life. The advice given about 'saving your game often' is very well founded and will usually allow you to recover from a critical mistake without having to play the whole level over.

Coherence and continuity are particularly prevalent in this game - each level follows on very well from the one preceding it as you slowly advance over the 'Civilised Lands' and wear down the evil onslaught. This is strangely satisfying and will result in all other life around you being temporarily ignored; you will loose friends over this obsession...

The game will quickly become challenging to even the most skilled game player – not through the violence levels that you will find in a game such as *Doom* (although they are there), but more through the very well-designed level maps and the open-ended way in which the game will leave you to complete the mission in whichever way you feel most appropriate. Usage of the overhead 'radar' is an absolute must, as it allows you to track your enemies. Just like pretty much every other battle game since Cavedog's *Total Annihilation*, the radar has a finite range limited by the position of your troops and each area of the map must be 'discovered' before it will show up on the scope.

Remember that you have two types of unit: short and long range. A bowman is useless over close ranges and will die very quickly, as will a dwarf. On the other



hand, warriors and giants are very useful for ground-based attacks of oncoming enemy thrall.

Single player is only a part of the overall action however, and the fun only really starts when you go online and face others on **bungie.net**. *Myth2* makes extensive use of on-line gaming and has many types of level devoted to it. My personal favourites are the 'Capture the flag' variants in which you must typically capture control of the flag by owning the troops nearest to it.

Other games involve playing collectively as teams against the computer generated enemy in the regular levels, as well as 'death match' for those who want large amounts of blood on their hands. The pre game 'chat' is a great way to get to know the other players and the game play is remarkably smooth over a dial-up connection – with occasional irritating exceptions. You bought the game; you're entitled to free membership of **bungie.net** – go get 'em!



The Cons

You will need a powerful machine to run this game. Although it will run on a Pentium processor, I would recommend at least a PII300 or faster. I would also very strongly suggest that everyone visit Loki Games' web site (**http://www.lokigames.com/**) and download the latest patches for *Myth2*. Please ensure that you download all the required patches and apply them in order. At the time of writing, the current patch will take you to version 1.3d (be sure to apply patches 1.3a to 1.3d) and will offer minor bug fixes as well as some useful functionality such as Alt+Enter switching between full screen and windowed mode (you will need to press scroll lock to release the mouse from the *Myth2* window and explore other parts of your desktop).

The game makes extensive use of the great work being done by the guys behind the SDL rendering library (a Linux equivalent of DirectX) to provide the actual graphics rendering but is faster if you have hardware acceleration.

Unfortunately, support for hardware acceleration under the 3.3.x series of *XFree86* is nowhere near as extensive as that for the newly emerging 4.x series. You will need to fiddle around with glide to get your 3dfx card working, but it is worth it if you have the hardware.

The game suffers from several irritating rendering bugs, including ungraceful handling of trying to go off the map and an occasional drawing problem with trees and shrubs which makes them appear a purplish colour at the very edge of the screen and is easy to confuse with a hidden enemy. The game doesn't even bother to attempt mounting of the CD-ROM and will simply crash if you have the *Myth2* CD in the drive but do not have it mounted when you try to start a new game (possibly due to changes for compatibility with Mandrake's supermount).

Improvements are being made continuously, and I have every reason to think these issues will be corrected. As an example, the demo required to be executed with root privileges (something your office admin won't like you having) in order to do direct graphics but was later fixed to use the vidmode extension to X.

Loki Games

Loki have only been around for a short period of time, however, they have churned out a number of very popular Linux ports of mainstream games. They are very dedicated to the Free Software community and, while their games are proprietary, they have released various useful utilities on their Web site (such as a free MPEG player as used in *Myth2*) and are participating towards developments of software rendering, 3D audio and even (possible) DVD efforts under Linux. They are currently working on several ports and they appear to have a bright future ahead in the emerging Linux game market - after all, penguins have fun too, right?

Summary

Myth2 has been hugely successful on both the Windows, Mac and Linux (ia32 and ppc) platforms. This success is mainly due to the fact that this game is incredibly good – sure, it has 'issues', as indeed does every other game on the market. Overall however, Bungie did an excellent job at creating the world that is *Myth*, right down to the blades of grass, accurate physics of arrow firing and witty commentary given by the characters during game play. I would certainly recommend that you download the free (large) demo from the Loki website and have a go (hint: use the side door to the castle). Don't forget to try out the 'fear' and 'loathing' level creation tools too.

See you at **bungie.net**!



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Works in progress

Richard Goodwin enters the New Millennium with the latest package from iSV Products

The New Millennium - not another badly-timed attempt to coerce you into thinking that we're already in the twenty-first century, but rather an updated version of iSV's popular design package. For those of you unfamiliar with the original, *DrawWorks Millennium* release, the CD comes with not only the eponymous graphic design aid but also a wealth of fonts and font utilities, clip-art and other extras: this new version offers more of the same, with even more goodies.

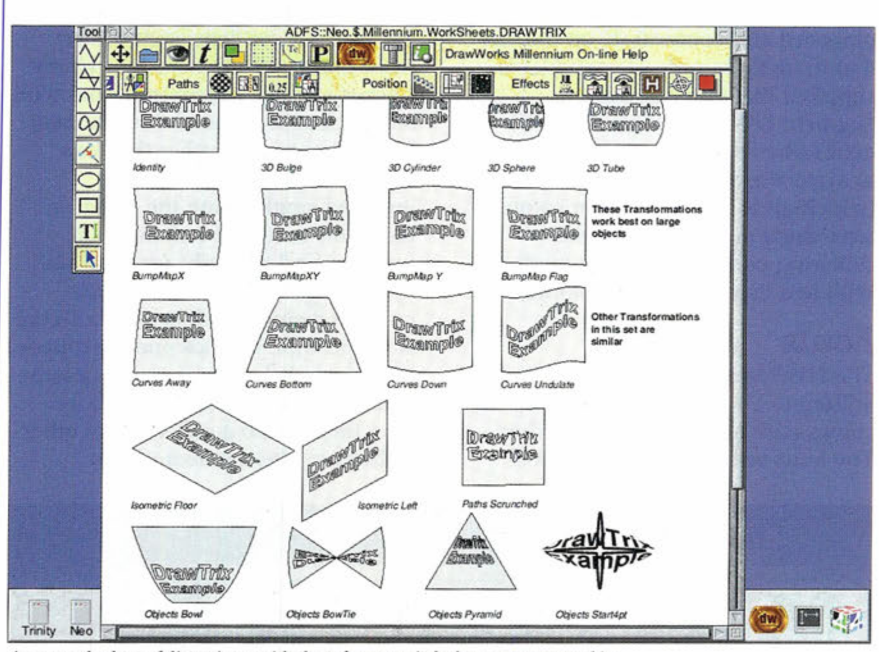
The graphics tools

The main program from which the suite takes its name (let's shorten it to *DWNM*) is not in itself a graphics package; rather it is an add-on to the standard RISC OS vector drawing package *Draw*. When you load *DWNM* it also fires up *Draw*, and opening a new *Draw* window you'll see a new double-height tool bar sitting across the top. The upper row breaks the program into sections (tools to do with colours, changing the view, file handling) while the lower has the individual controls (spot colour controls, view scale, file import tool and so on).

The tools provided range in complexity considerably. Some simply reproduce elements from within *Draw* itself; for instance, control over grids just moves the menu options to a more immediate place, and the ability to zoom in and out is an extension to the existing zoom function. Others are completely new, such as the advanced colour handling (tinting, using named colours and the like).

Sometimes there are a few too many tools; with a standard A4 sheet of virtual paper sometimes you get only half the tools on the screen at any one time, and as there's no scroll bar you have to wait for the tool bar to scroll back and forth at the usual pedestrian autoscroll pace. Even as it is though you've lost a chunk of usable space at the top of your *Draw* window; you can drag the tool bars off the *Draw* window altogether, but I can't help feeling that a better design could have been used, perhaps a properly free-floating window.

Concentrating on what *DrawWorks* gives over the standard *Draw* setup, there are two main areas that caught my eye; substantial improvements on



An example sheet of distortions, with the software switched to use a copper skin.

file and colour handling. You can now import many more files formats and save out as vector or anti-aliased bitmaps (Sprite, JPEG, GIF and TIFF without the need to fiddle around with screenshots), although I was disappointed that the *ArtWorks* importer resulted in a bitmap and requires 4-8MB of memory to process a file. Adding standards such as better EPS handling helps make *Draw* a more rounded package for anyone wanting to produce images for real world applications.

Similarly, the handling of colours, tints, effects and colour separations boost *Draw's* performance in this area past that of *ArtWorks*. There are also some cool effects such as changing lines into fat white lines edged in black so you can quickly knock up a road map, easy creation of drop shadows and so on.

Apparently one of the most requested additions was the 'Bolt-on' tool bar, which allows you to drag and drop applications into icons on the *DWNM* tool bar and fire them up as if they were part of the main program. Given that I've spent quite a bit of time in the past cataloguing and designing icons for *Voyager*'s Vix programs (add-ons to the ArgoNet internet suite) I guess I should shy

Installing and previewing fonts using the (very yellow) software provided.

away from comments about it being a glorified extension of the desktop pinboard and concentrate on the fact that there's a bundle of useful tools supplied that you can use to augment DWNM – from *Draw* file extras like *SpiroDraw* and *DrawLots* to system extensions like *CTEnhance* (which gives vastly superior colour reproduction by changing the dithering patterns in screen modes with less than 16 million colours).

Fonts

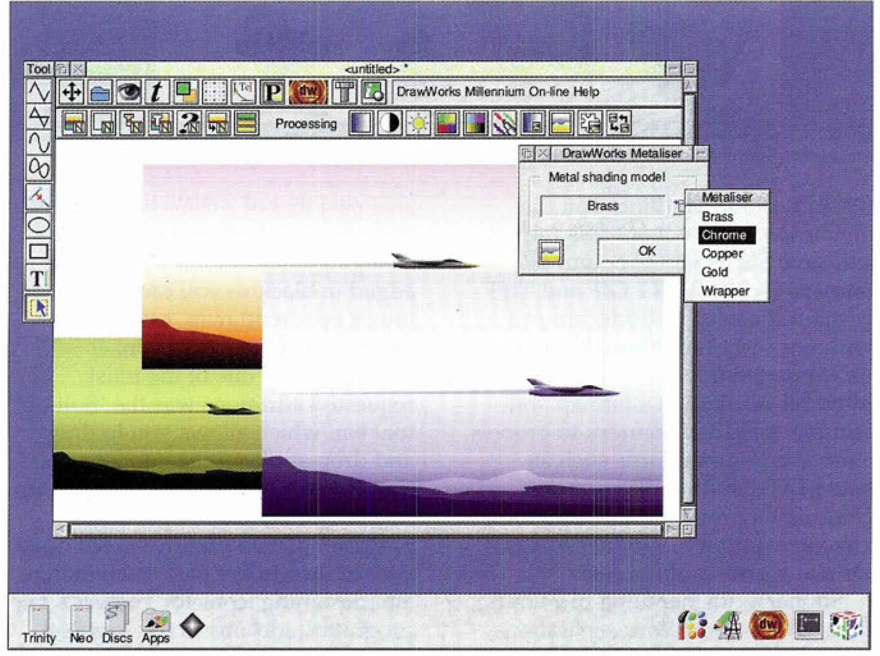
The *DWNM* package is not all about adding to *Draw* however; the disc comes with a host of other goodies. The fonts selection – almost 2,500 typefaces in all – contains a solid collection of font families, which allows for more consistent design than, say, a collection such as Harry Decker's which concentrates more on having lots of outlandishly different fonts. Grouped together they can either be run from the CD, or installed singly using the preview tool. This excellent tool makes it quick to find the right font and use it, although the yellow and blue colour scheme which breaks both the standard RISC OS look and the copper 'skins' used elsewhere is a bit much.

If 2,500 fonts aren't enough for you, there's also a collection of other utilities to alter or create fonts yourself; these are accessible right out of the *DrawWorks* tool bar, so there's no excuse for moaning about not having the right font any more. *FontFiend* allows you not only to edit fonts in a similar manner to *FontEd* (which is also included) but also to do tricks like automatically create oblique versions, and even create font characters from *Draw* objects just by drawing a character in *Draw*, selecting it and 'saving' that selection straight to the position you want it in the font table – very handy. For more font effects there's *Font TrixPRO*, plus tools for kerning, changing names etc.

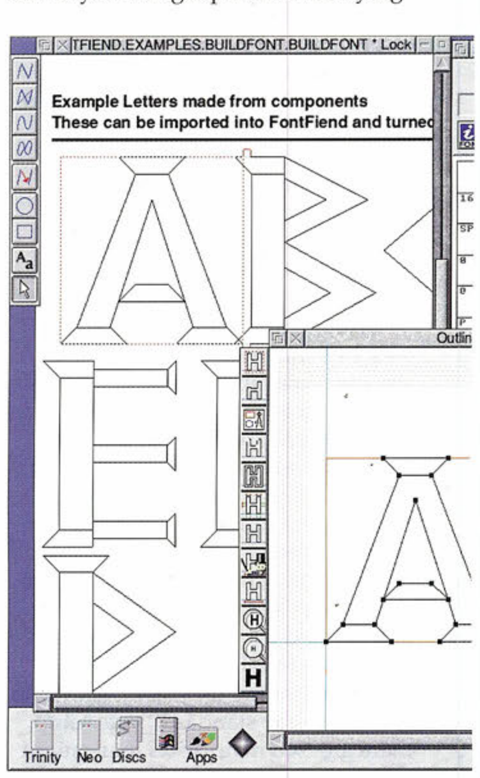
Clip-art

The clip-art supplied is a pretty nice collection of bitmaps and vector images, some 200K in all. The bitmap images are in JPEG format for scans of photographs or slides with a good selection of backdrops, images of foreign views and miscellaneous scenes, or sprites for the lower quality images such as the monochrome engravings or postcards that appear to have been taken from GIFs originally. The vector images, *Draw* format naturally, follow a similar pattern of providing a mixture of objects, scenes, cartoons and so on.

So that you can manage your clip-art – around 1,800 pieces in all – there's a program called *Mr. Clippy*. I've stumbled upon this chap before, and if you can get past the annoying



Using the 'metaliser' to tint this scene.



FontFiend in action, converting a character designed in Draw

singing banner at the start (which you can't quit) then it's actually a pretty handy tool for cataloguing your images, allowing you to break them down into sections and sub section. Using pre-converted 256 colour sprites it's pretty nippy once everything's been stored, and of course comes with the clip-art provided already catalogued.

Looking good?

One of the things that annoyed me with the original release was the garish user interface used in some of the programs in the suite; from *Mr. Clippy*'s cyan and yellow monstrosity to the gold effect and midnight blue used on the font explorer. With the current vogue for 'skinning' – being able to change the look of the user interface by changing the background and icon sprites – iSV has taken the opportunity to not only tone down some (but not all) of the worst excesses but also to allow you to change skin on *DWNM*. *Mr. Clippy* still sings on start up until you rip the banner loader out of the *!Run* file, but at least the choice is the new 'copper' look or the default RISC OS look and feel, not the previous technicolor yawn.

It's a pity that some of these new additions are hard-coded into the programs – for instance, in the main program you can only have the 'copper' (yellowy beige and orange) skin or the standard RISC OS one; there doesn't seem to be any provision in the program to scan for additional skins. The same also goes for things like the 'metaliser' – although it's fun to play with the provided tint schemes, it would have been nice to be able to create and save your own, even if it's by changing the values in a text file. Offering these little extras to download from a Web site keeps people coming back for more.

DrawWorks New Millennium costs £40 for a CD, or £20 for an upgrade from the older version; before you rush to upgrade however you should be aware that while the older version ran on all RISC OS 3.1+ machines, the newer version is RISC OS 3.6 or above to take advantage of some of the features (and extra memory) of newer machines. Hence, both versions will be kept on iSV's books so that you don't miss out.

Conclusion

On the down side, one of the major drawbacks to *DrawWorks* is not the program itself but rather the reliance on *Draw* itself; back when *Draw* was the only thing available I used it for many years fairly happily, but a few minutes with a more modern vector package such as *ArtWorks* or now *Vantage* shows just how awkward the *Draw* interface can be.

Although *DrawWorks* can take a little of the pain away from, say, having to hunt through a menu for the zoom controls, it can't help some of the fundamentals like the way *Draw* handles trying to select an object in the middle of a bunch of other objects. There's also the fact that many of the 'tools' in the main program are merely duplications of the options on the standard *Draw* menu.

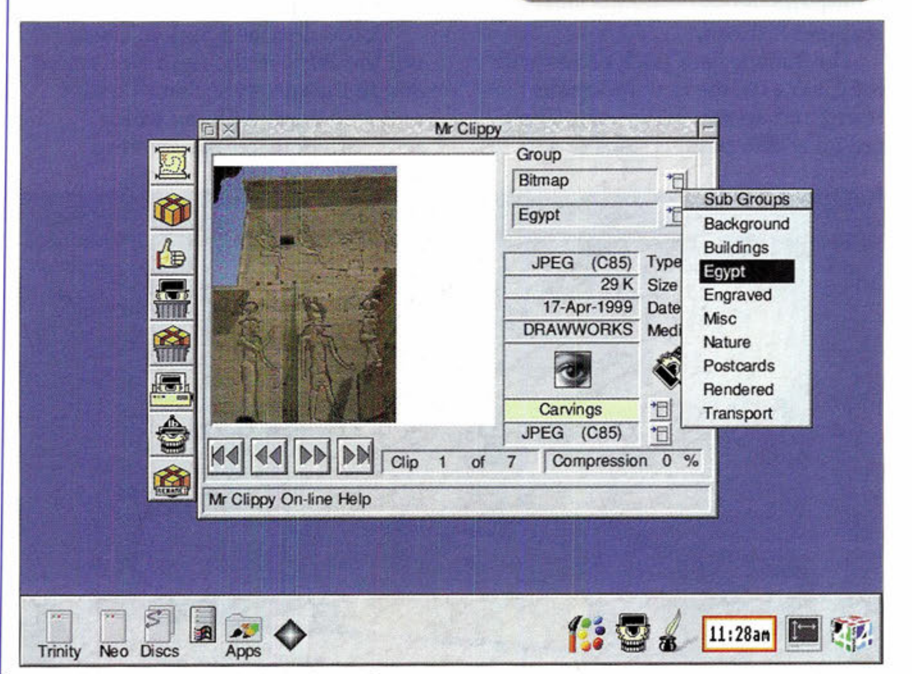
However, on the plus side there are some excellent features that do add to your array of tools; some time savers such file import could probably be duplicated with a little time, effort and an arsenal of PD programs, while others like the advanced colour handling are either only available in much more costly programs, or completely unique.

Having a single, fairly cheap package that handles so many features represents good value for money. It's the extras however that make this CD; if the asking price were for the graphics enhancements alone then I'd say it's a toss up whether to go for this or save a little more and go for something more user-friendly, but if you factor in a large, well-managed fonts collection, a good selection of clip-art, plus tools such as the *FontFiend* font editor then it represents excellent value for money for schools, students and those who like to dabble in graphic design. **END**

Product details

Product:	DrawWorks New Millennium
Price:	£40 (plus P&P)
Supplier:	iSV Products 86 Turnberry, Home Farm, Bracknell, Berks, RG12 8ZH
Tel:	(01344) 455769
E-mail:	atimbrell@aol.com
Web:	www.isvproducts.co.uk

a font, and making it oblique.



He's Mr. Clippy; he stores clip-art and sings for you.

Moving i

Steve Turnbull takes a look at the pros and cons of the new processor card

There is an argument that says the editor of a computer magazine shouldn't have the most powerful computer available in the market – having a less powerful one reduces arrogance.

On the other hand, there comes a time when a bit of indulgence must be permitted – and I think working with an ARM600 Risc PC for the last seven years is a sufficiently humbling experience for anyone.

So, at the Wakefield Show, I took the plunge and acquired a Kinetic card for the office – I had already upgraded my personal Risc PC 600 to a StrongARM a few months ago and had enjoyed the benefits of that.

Installation

Putting my extremely heavy workload to one side – on the basis that the time I spent installing the new processor would ultimately be re-paid thoroughly by the amount of time saved using the faster processor – I unplugged my machine and stripped it down.

The Kinetic card pack comes with RISC OS 4.03, the new processor board and an anti-static strip. There are three different versions of 4.03, one each for Castle, RiscStation and MicroDigital, basically they have identical functionality with the different hardware configurations.

The instructions say that you should install the new RISC OS chips first, to use with the existing processor to ensure that that's been done correctly, and then upgrade the processor.

Well, that didn't work. Having delicately removed the RISC OS 4 Flash ROMs (for return to Castle in part-ex) I put in the new chips – while memories of chip insertion and removal in the BBC Micro flew through my mind – put the machine together sufficiently to function and switched on.

I got a black and green slow flashing screen.

Ooops. I rushed back to check I'd put the chips in the right way round and in the correct sockets. I had. I removed them with my trusty screwdriver (carefully levering evenly from each end) checked the pins and re-inserted. Switch on: same problem.

I considered the options: I could give up and restore the system, then make some enquiries. Or I could assume the instructions were wrong. After all, I reasoned, the people who wrote the instructions had almost certainly upgraded StrongARM machines, not ARM600s. Also nothing was cooking, it just didn't work.

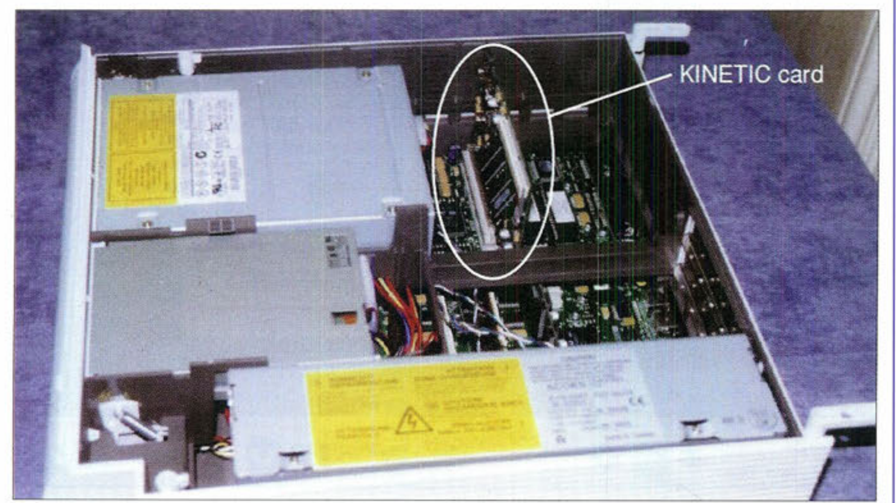
So I put in the Kinetic, switched on and bingo! it worked. Not only that but I was stunned by the start-up time of just a few seconds and rather pleased by the larger amount of memory announced. Yummy.

Right so, point one, installation is relatively easy but if you are upgrading an ARM600 the original instructions are wrong.

Now it had hung-up while booting so I went through the boot-up sequence removing everything and then putting programs back one at a time. It turned out I didn't have a StrongARM-compatible version of MacFS, but I haven't had to format a Mac disc in years – we share a network now. So it was no loss.

To speed up start-up time I also use a saved font cache containing the desktop font – unfortunately Acorn programmers made the serious error with the font cache and if the amount of memory in the computer changes the saved font cache won't work.

With the vastly increased speed I removed the saved cache completely – it wasn't a noticeable loss. Another point worth mentioning is that this particular machine does not have any peripherals or extra cards, it has



So, all we have to do is plug-in the new KINETIC card?

nto action



a couple of IDE harddiscs and a network card. The importance of this will become clear when we get on to the downside.

Workload

The RISC OS side of the production for *Acorn User* consists of all the editing and sub-editing of the words in *Impression* – occasionally porting files from *Word* into *TechWriter* and then loading the text from there to *Impression*, or occasionally from *Ovation Pro*.

After editing and inserting the necessary styles the text is saved as text with styles and filtered through a non-multitasking program, written by ex-*Acorn User* editor Mark Moxon, which converts the styles to something *Quark XPress* on the Apple Mac will understand. The text for a one page article took a little over a second on the Risc PC 600.

The pictures arrive in various formats: Sprites, Drawfiles, Artworks, JPEG, PNG and numerous other "foreign" file types. Files which are vector graphics (drawfile and Artwork) are put through *Artworks* and output as Adobe *Illustrator* files – except when we get the dreaded "Out of memory" error – using a nifty two-line addition to the resultant files these will load into *Illustrator* versions beyond v5.

If the memory fault occurs we take a step back to another program commissioned by *Acorn User* (but available as PD) *Art2Spr* which renders Artwork or drawfiles to sprite (with various colour depth and scaling options) which can then be saved.

Sprites are converted to compressed TIFFs using a multi-

tasking custom application (*TIFFer*) written by Ben Summers which will batch-convert sprites simply by dragging a whole directory to its iconbar icon. Other formats are just passed across to the Mac untouched as *Photoshop* can handle them easily.

Converting a directory of screen-grabs could take anything up to half an hour, although a set of small ones would run in a few minutes.

Most of the adverts you see in *Acorn User* are also produced initially on RISC OS, these must be converted as-is for the Mac. The technique used in this case is to use the colour Postscript printer driver to produce a postscript file which is then passed over to the Mac and rendered as a bit-map at the appropriate resolution in *Photodesk*.

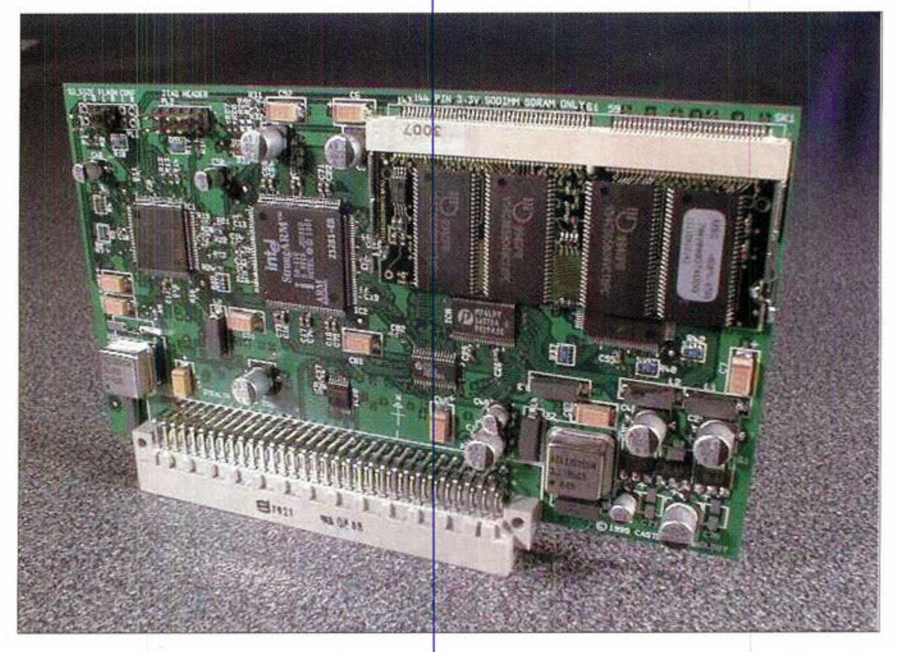
Some of the adverts can produce files in excess of 20Mb and both the creation process and the data transfer by network to the Mac, can take a considerable amount of time, up to fifteen minutes and five minutes respectively.

Apart from that there are the letters that need to be printed and various administrative documents including spreadsheets and databases. We don't do a great deal of image processing in RISC OS although considering how much difficulty an iMac has in throwing around the big files used for the cover and

Faster than...

So with that summary of the kind of jobs I use the machine for let's take a look at the kind of results achieved by putting in the new card. Now we're not looking at official timings here, there's really no point, everybody has different needs and what counts is how a system feels to the user.

I've already mentioned the start-up speed, technically speaking (in addition to booting up whatever applications you happen to have) the new system also copies all the ROM-based modules across into the RAM which runs faster anyway. It has



been argued that it's relatively simple to set up any machine to do this anyway, which may well be true, but the Kinetic also gains by not using the slower Risc PC bus.

So we have faster start-up, I also notice a dramatic increase in window response: the speed with which windows appear and are re-drawn, smoothness of the drag and so on. More than twice I've had a double-take on the speed, thinking "oh it didn't do it" when, in fact, it had happened so fast that I hadn't noticed.

It's a curious effect and I think it's because there's no "motion" on the screen: on slower machines (and that includes the 200MHz StrongARM Risc PC I have at home) when a window is removed there is a perceptible lag in the redraw. The combination of RAMmed modules, RISC OS 4 and the faster hardware design has taken the redraw speed beyond what I notice hence the changes appear instantaneous.

Taking the tasks I do as routine, the loading of applications is considerably faster: small applications just flick into existence on the iconbar with no flicker – a problem because I had learned to take the flicker as a cue that the task had loaded, more double-takes. Launching large applications is faster by a factor of six to eight over the ARM600. It makes work less tedious and, as I dislike a cluttered iconbar, I feel less bothered about quitting applications that might take a while to reload if need them.

The redraw speed on *Impression*, *Artworks*, *Draw* and the like, is quite staggering – complex documents may still take a noticeable time for redraw but for the ones I deal with (such as adverts) it's now very much faster. Quite often I would ensure that only a tiny amount of the document was showing in the window to ensure redraw time was kept to a minimum, this is no longer necessary.

The double-take effect occurs once again when converting text files to Quark-understandable format, without even a flicker it's impossible to tell when it's done – I'll have to modify the program to alter its icon when its processing a file so there's a visual clue. Processing sprites into TIFFs multitasks and puts up a window showing its progress, this now flies through the files at an incredible rate – I haven't yet got

over the need to watch it happen. But even waiting and watching is worthwhile since it's fast enough that I don't really have time to make a cup of coffee.

But the really big test is the *Acorn User* adverts, some of these full page adverts are huge and create huge files. While normal documents now take less than three seconds to print, even one of these big files is down to under ten seconds to create a 20Mb postscript file, then throwing it over the network to the Mac – even that has been speeded up. now if the 300MHz+ iMac was four times faster it could match the speed delivered by the Kinetic combination.

Does that seem crazy?

It isn't. In the PC world they talk a lot about specifications and clock speed, even the Mac people do that but the fact is that what counts is machine power delivered to the user. This is where RISC OS beats the competition hands down, clock-tick for clock-tick RISC OS simply delivers more power and hence appears to be a machine with a higher clock speed than it actually is – when compared to other machines.

Hence a 300MHz iMac appears slow and unwieldy, as "bad" as the original Risc PC 600 running at a sixth the clock speed. But the new set-up with the fast processor, RISC OS 4, RAMmed operating system – plus the new memory bypassing the bottleneck of the old Risc PC bus, gives a machine that in terms of delivered power gives a productivity four times the iMac.

Plain sailing?

And that's the good news. But that is not, unfortunately, the whole picture. There are problems – you can't move the memory to a radically different location without breaking something.

While it is true that no typical application should have any problems – and I haven't found one that does – there are difficulties with some systems.

DMA (direct memory access) is a hardware system from transferring data from one place to another without involving the main processor. Hard disc systems such as SCSI use DMA when moving data to and from the hard disc.

But DMA does not work on the Kinetic because the memory isn't where it's supposed to be – this doesn't mean that all SCSI cards fail because most of them have fall-back options to use a different system if DMA is not available, however the fallback method is slower. There is an argument that says if you're using a Kinetic for very big image processing work and virtual memory is in use on SCSI discs, you could get a drop in efficiency.

We have not been able to test this yet but we'll bring you the information on it as soon as possible – of course, even if that's true, it's impossible to give a complete answer as to whether the Kinetic is a good thing or not, because much depends on what else you use the system for – do the other tasks you will perform faster make up for the slower SCSI access? One area that's looking to be a serious problem is PC cards, these do not work under RISC OS 4.03, it came to light because a Risc PC is the only thing that can have a Kinetic and a PC card, although apparently there is also a similar problem with NetBSD. The question at this point is whether the problem occurs because there's a RISC OS 4.03 bug in the Castle version; or whether it's a general RISC OS 4.03 problem that's only come to light because the Risc PC can have PC cards plugged in.


The slimline SDRAM card

Should you buy one?

In conclusion let's take a look at who should buy one of these, and who shouldn't. If you have a Risc PC with an ARM600/700, and you haven't upgraded to RISC OS 4, I would give you an unequivocal yes. Buy it, you get a powerful StrongARM, extra memory and RISC OS 4 in a convenient package that will completely amaze you.

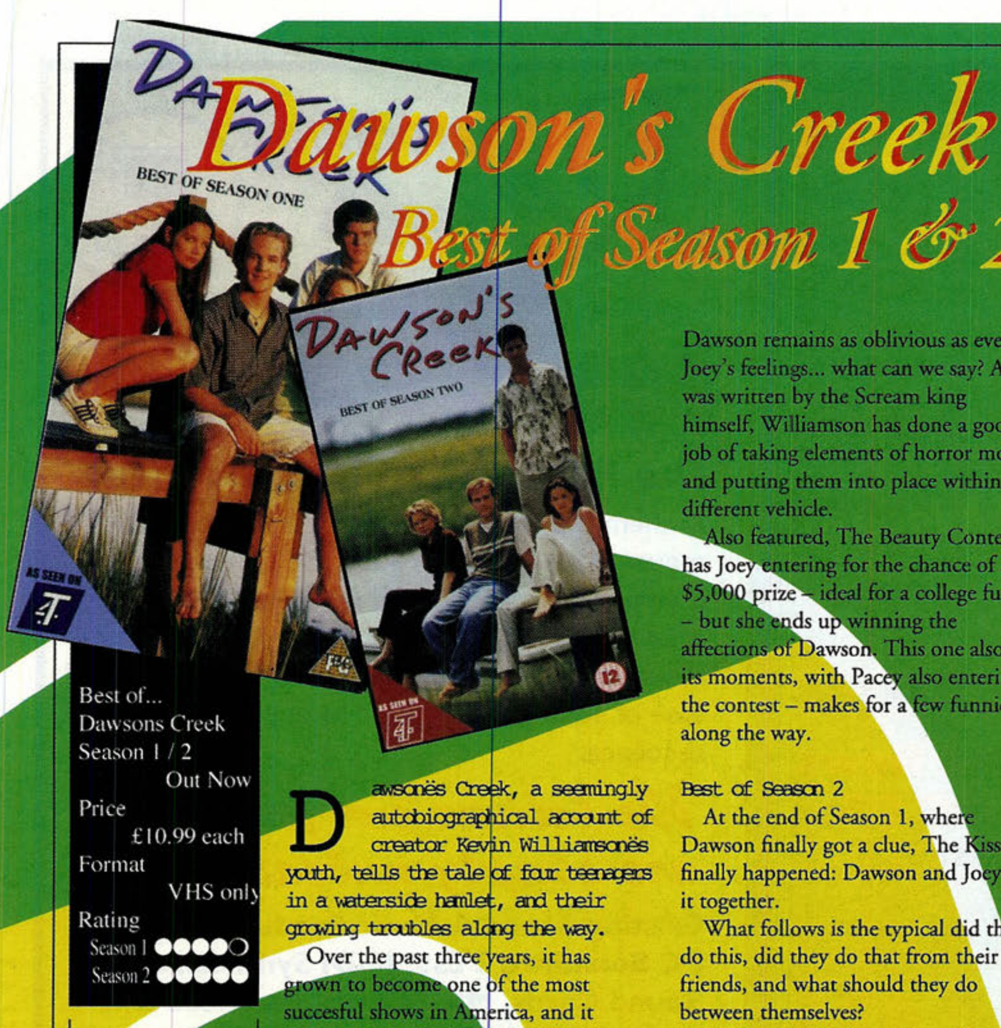
If you are running StrongARM Risc PC with RISC OS 3.7, I would say probably yes. It's a reasonable deal, the machine will run noticeably faster and you get RISC OS 4. A rarer likelihood is that you're running RISC OS 4 on an ARM600/700 (as I was). Once again I would say, yes it's a reasonable deal which will run dramatically faster – you'll love it.

If you already have a fast StrongARM and RISC OS 4 then it's doubtful whether it's worth it. Save your money for a Viewfinder card which will be reviewed in the next issue.

END

Product details

Product:	KINETIC Risc PC upgrade £399 plus VAT; basic KINETIC Risc PC £999 plus VAT
Supplier:	Castle Technology Ltd, Ore Trading Estate, Woodbridge Road, Framlingham, Suffolk IP13 9LL UK
Tel:	01728 723200
Fax:	0800 783 9638 (freefax)
E-mail:	acorn@castle.org.uk
Web:	www.castle.org.uk



Dawson's Creek
Best of Season 1 & 2

Best of...
Dawsons Creek
Season 1 / 2
Out Now
Price
£10.99 each
Format
VHS only
Rating
Season 1 ●●●●○
Season 2 ●●●●●

Dawsonës Creek, a seemingly autobiographical account of creator Kevin Williamsonës youth, tells the tale of four teenagers in a waterside hamlet, and their growing troubles along the way.

Over the past three years, it has grown to become one of the most succesful shows in America, and it doesn't do too badly in the UK either.

Quite what makes it so popular is difficult to guess: it's probably because most of us can recognise some similarities with what goes on. It's gritty; it's almost real – and this has finally been recognised by Columbia Tristar with the release of two videos!

Best of Season 1

There has, to date, been only one episode of Dawson's Creek not to be screened during the 'evening peak' – this, The Scare, is featured on this tape.

Taking strong influences from Scream and I Know What You Did Last Summer, Jen has a prank caller (a la Scream), Joey plays dead, Pacey brings back a psycho girlfriend and Dawson remains as oblivious as ever to Joey's feelings... what can we say? As it was written by the Scream king himself, Williamson has done a good job of taking elements of horror movies and putting them into place within a different vehicle.

Also featured, The Beauty Contest has Joey entering for the chance of a $5,000 prize – ideal for a college fund – but she ends up winning the affections of Dawson. This one also has its moments, with Pacey also entering the contest – makes for a few funnies along the way.

Best of Season 2

At the end of Season 1, where Dawson finally got a clue, The Kiss finally happened: Dawson and Joey got it together.

What follows is the typical did they do this, did they do that from their friends, and what should they do between themselves?

His Leading Lady tells how Dawson is trying to locate an actress to play the part of Joey – from whom he has now broken up – in his autobiographical movie... here we find out, for the first time, that Joey really misses Dawson – and eventually she will get him back.

Between these two tapes, you've got a good cross-section of what life in Dawson's Creek is like. It's gritty, it's moving and sometimes it made me want to cry.

What can we say, other than if you're a Dawsons Creek fan, get them both. If you're not a fan, or have yet to find out more, try watching Dawsons Creek on Tuesdays at 6pm on Channel 4, repeated Sundays at 12.40pm.

Dave Bradforth

RiscAction
Magazine
Out Now
Price
£2.00
Format
Without Disc

RiscAction is the latest entry into the RISC OS marketplace. Featuring articles written by users, for users itës begun with a reasonable reception: and weëre looking towards taking this further!

At the Wakefield 2000 show we're pleased to be able to offer a sample edition of RiscAction, without the associated discs, for £1. The price of issue two, with three discs and the *Typography* CD-ROM is £4.

The cover feature of this issue takes a look at options for hard disc backup, and safe restoration of stored data.

We also delve into the realms of design mania, to demonstrate just how bad a design can really be... Sorry we meant good, obviously!

Another new magazine, *RISC World*, goes under the spotlight as we look back at where APDL (the publishers) came from, and where they hope RISC World will go.

Other than that, we hope to see you at Wakefield, and are looking optimistically to the future.

After all, if we can't look into the future what could we possibly have left?

Amy Smith
Editor, RiscAction

MAGAZINE BACK ISSUES

Copies of *RISC User* (most of volume 12), *Archimedes World* (last issue) and *Acorn User* (issue 200) are still available – at just £1 plus 20p postage each. To order, send a cheque/postal order for the total amount (made payable to David Bradforth) to:

Magazine World, 40 Honiton Road, Romford, Essex RM7 9AJ

Strictly subject to availability – if we have run out, you will be refunded for the issues requested we no longer have.

Maximum overload



Way, way, way back in time was a computer called the ZX Spectrum. It was small, had a terrible implementation of BASIC, but was extremely cheap and had a massive games base. Now on that machine, there was a classic called *Jetman* (from ACG). It was a lovely sideways scroller in which you had to collect the parts of your spaceship, fuel and wot-not in order to proceed to the next level. Cheap, cheerful, playable and fun, but as with all the Spectrum games, very limited.

The idea is ultra-simple: Collect the Fuzzies (alien life forms) and kill the other aliens without being killed yourself. Each "level" consists of four or five stages (collect the Fuzzies, kill the aliens, collect power points and navigate through an asteroid belt with a bonus level sometimes thrown in). Easy peasy.

Well, that's the review done.

Not quite.

What is especially good about this game is the diversity in play. While on the outside, the game is just a left-right scroller, the tactics required to complete each level are very different. It is not enough to just go around blasting the living heck out of the aliens for a start, you can't. You have limited ammunition and energy for your jetpac (a lovely touch being that as your pack's energy level drops, so does your speed and ability to jump to shoot), some of the enemies cannot be killed by just blasting them head on and worse still, some of the blighters tend to kill.

The programming team have gone above and beyond the call of duty with this one, the music is first class, the sound effects are brutal, the game is colourful, there is plenty to keep your imagination (and fingers) busy for hours with the very colourful graphics and super-fast (fifty frames per second) animation.

My only cause of criticism is not in the game, more the fact that the software cannot be directly played from the hard drive without having the original disc being in the floppy drive. While this is fine if the floppy drive is working and the disc itself is intact, it is a pain if one of the two decide to fail. If software is to be protected, I would much rather use the method employed by Clares (credits and manual-based codes) over the key disc.



Remembering back again to the original 4th Dimension software which used this system, when we moved to the StrongARM, most of the cause why software did not run was down to the key disc system. With the possibility now of having a true 32-bit operating system, will we be in the same position as before with the key disc systems?

That all said, Paradise have done a marvellous job with this and, until I saw the very modest price, I thought I was playing one of the £25-jobs only normally seen from RCI or, in days of old, Krisalis – but this is retailing at just £13 – great value for money.

Even on my A3000 machine, the speed of play was no different to that of my SA Risc PC and RiscStation machines (plus it has kept my seven year old daughter occupied over the rainy bank holiday weekend – justification for the price in itself) and as for addictiveness – like *Elite* and so many before it, this game is hard to put down. Go out and buy it now!

My hope here is that Paradise continue to produce games of this calibre in the future and bigger hope, that I am asked to review them.

Richard Jane

Product details

Product:	Overload
Price:	£12.99
Ages:	5-7
Supplier:	Paradise Group, 38 Marlborough Drive, Sydenham, Leamington Spa, Warks, CV31 1GD

Science of

Alan Gibson makes even more music

MIDI is an acronym for Musical Instrument Digital Interface. Basically, it is a standard way of connecting electronic instruments and computers together. Such instruments are usually piano-type keyboards or sound modules but can also include, for example, lighting units which flash in time to the music you are playing. During this article, references to keyboards are to those with piano-style keys and not to computer keyboards.

A sound module is essentially a large quantity of very high quality sound samples stored on a chip which are played by sending MIDI messages (for example, note pitch and duration) from a computer or keyboard and out to a speaker system. These sounds can also be modified in real-time with effects such as pitch-bending and modulation (vibrato), and can also be processed to make them sound 'fuller' or have reverb and so forth.

Most keyboards in a MIDI setup are usually 'home' keyboards/digital pianos or master controllers. The typical home keyboard has 49 or 61 keys with a built-in sound module and speakers. Master controllers are just a set of keys with no sounds – they are used for controlling a computer or (several) external sound modules.

Adding MIDI capabilities to previous Acorn hardware has been expensive because of the custom interfaces required. Whether it be an internal expansion card or a parallel port interface you still have to pay close to £100 just for the interface. On top of that you require a couple of MIDI cables plus whichever combination of keyboards and sound modules you need.

```
*MidiMap
MIDI Support Driver Map

  MIDIPort0 ( Version:1 Date:27 Apr 1998 )
   Connected to: RiscStation_MPU401_1

  MIDIPort1 ( Version:1 Date:27 Apr 1998 )

  MIDIPort2 ( Version:1 Date:27 Apr 1998 )

  MIDIPort3 ( Version:1 Date:27 Apr 1998 )

  RiscStation_MPU401_1 ( Version:6 Date: (25 Apr 2000) )
   Connected to: MIDIPort0
   Connected to: RiscStation_MPU401_1
   Connected to: MelIDI_A

  MelIDI_Lyrics ( Version:1 Date:(26th Jan 1999) )

  MelIDI_Sample ( Version:1 Date:(26th Jan 1999) )

  MelIDI_PluginC ( Version:1 Date:(26th Jan 1999) )

  MelIDI_PluginB ( Version:1 Date:(26th Jan 1999) )

  MelIDI_A ( Version:1 Date:(26th Jan 1999) )
   Connected to: RiscStation_MPU401_1
   Connected to: MIDIMeter
```

Figure I: Example MIDIMap output

With the arrival of the RiscStation machines this has all changed as they have MIDI hardware supplied with every machine as standard. As with every PC you can buy, they have a games port on the back which looks like a shortened printer port. This is a combined MIDI/joystick interface and simply requires a MIDI 'breakout' cable and driver software to work. Also, inside every RiscStation is a 'wavetable' connector which allows you to add an internal sound module very simply. This review will look at the three 'Accent' packs which RiscStation produces which cover each of these options.

Pack 1 provides the software drivers and breakout cable, which you would use if you simply want to connect your existing keyboard or module to your machine. The software is supplied on a floppy disc as an update to the *Boot* structure – you simply drag the update over the *Boot* on your hard disc and the driver will then be run every time you switch on.

The breakout cable consists of a plug which goes into the games port connector and provides two standard MIDI cables (one IN and one OUT) which are about 2m in length. These plug straight into your keyboard or sound module so no extra MIDI cables are required.

The driver is written by ESP, who have a long history of producing MIDI products for RISC OS machines and contains a full MIDI Support driver. MIDI Support is a more efficient and configurable driver than Acorn's original code but remains backwards-compatible with it. MIDI Support allows you to have multiple interfaces in your machine and you can link any input to any output by issuing software commands. So if you have a sound module which has two INs, you can add, say, a parallel port interface in addition to this pack to give you two outputs. A MIDI Support device can either be a hardware interface or a piece of software.

Figure I shows part of the mapping display on my RiscStation which is running the powerful *MelIDI* sequencer with the ESP driver. *MelIDI* knows about MIDI Support devices and thus takes full advantage of them. The map shows each source of MIDI data available with their destinations immediately underneath. MIDIPort0 is the backwards-compatible 'Acorn port' which is used by older software such as *Sibelius* (which will not be listed). Here, this is connected to the RiscStation driver (RSD), meaning that anything which comes into the computer's MIDI IN socket will be handled by the RSD.

Further down, the RSD is connected to three destinations (one in, three out!). It is connected to the standard OUT and is also connected to itself. This means that any MIDI data received by the RSD is immediately sent back out again, giving you a MIDI THRU in software (this allows you to hear what you're playing if recording in Flexitime with *Sibelius*). Finally, it is also connected to *MelIDI* so you can play in notes into the sequencer.

At the bottom of the list, MelIDI_A (MIDI channels 1-16) is connected to both the RSD and to a VU-meter application. As you can

Sound

see, MIDI Support is very flexible – if you do have a parallel port interface for example, it will appear on the list as well and you would simple 'connect' MelIDI_B (channels 17-32) to ParallelMIDI, giving you a 32-channel output from your RiscStation.

Pack 2 adds an internal sound module to what you get in pack 1. A few years ago Audio Dynamics brought out a card called the PowerWave (which ESP later took over as the DMI50 series). This has an XG sound card upgrade available (a Yamaha DB50XG) which is a sound module on a small daughter board and plugs onto the wavetable connector on this card. As mentioned previously, the RiscStation motherboard has a wavetable connector as standard and Pack 2 contains the latest version of the daughterboard, the DB51XG.

This has the same specifications as the DB50XG but is only 9cm square. Simply by plugging the card in, the RiscStation gets an exceptional internal sound module which plays through the internal sound system (you listen through the speakers plugged into the headphone socket). If you have any MIDI-equipped games (like *Doom*) they can use the card as well.

Figure II gives brief specifications of the card. The samples are created with Yamaha's AWM2 technology. All this really means is that the sounds are of a very professional quality (and indeed are used by professionals) and when used correctly can often be indistinguishable from real instruments.

MIDI Instruments

	Track name	Chan	Bank name	Bank	Patch
1	Bass lead	1:1	Bass	F	SlapBass2
2	Bass harmony	1:1	Bass	F	SlapBass2
3	GrandPiano	1:2	Piano	B	GrandPiano
4	Finger Bass	1:3	Bass	F	FingerBass2
5	Tenor Sax	1:4	Reed	J	TenorSax
6	Baritone Sax	1:5	Reed	J	BaritoneSax
7	BriteTrumpet	1:6	Brass	I	BriteTrumpet
8	Trombone	1:7	Brass	I	Trombone
9	Standard kit	1:10	Drum Kits	R	Standard kit

AcousticBass	JazzRhythm	VXUpright	FingerBass
FingerDark	FlangeBass	Ba&DstEG	FingerSlap
FingerBass2	ModAlem	PickBass	MutePickBass
Fretless	Fretless2	Fretless3	Fretless4
SynFretless	Smooth	SlapBass	ResoSlap
PunchThumb	SlapBass2	VeloSlap	SynBass1
SynBass1Dark	FastResBass	AcidBass	ClvBass
TeknoBass	Oscar	SqrBass	RubberBass
Hammer	SynBass2	MelloSynBass1	SeqBass
ClkSynBass	SynBass2Dark	SmoothBass2	ModularBass
DX Bass	XWireBass		

Figure III: Pick a bass. Any bass...

General MIDI (GM) is a standard which gives 128 sounds/programs (for example: piano, flute, bari sax etc.) specific program numbers which are adhered to by every equipment manufacturer, which means that a MIDI file will sound very similar no matter which machine it is played on. Yamaha extended this standard and called it XG, which allocates many similar sounds to the same program number but with different bank numbers, thus allowing many hundreds of sounds to be provided while still maintaining GM compatibility.

In XG mode, you have access to 480 sounds (everything from orchestral instruments to bizarre sound effects) plus 11 drum kits and you can play up to 16 different sounds at the same time (that's 16 MIDI channels) with up to 32 notes at once although some complex sounds can use two notes at a time, reducing this total. Chorus, reverb and variations allow you to alter the quality of the sounds, sometimes quite dramatically. Each sound can respond differently to these effects but you can make sounds fatter, thinner, breathier and so forth, this is down to software control and so your software must be able to send the commands to do this.

External versions of the DB51XG also exist in the guise of the MU15 and it's predecessor the MU10. To add an MU15, MIDI interface and cables and so on. to a Risc PC would cost just over £300. Doing a similar internal installation (a DMI50XG card which is based on a dual MIDI card) is over £250, so having the ability to add the same functionality to the RiscStation for less than half that is excellent value and it doesn't take up an expansion slot!

Pack 3 includes all the above and

```
DB51XG specifications.
Wavetable tone generation (Yamaha's Advanced Wave Memory 2).
676 voices in total (480 in XG, 579 in GS).
21 drum kits (11 in XG, 10 in GS).
16 parts, with maximum of 32 notes polyphony.
11 types of reverb, 11 types of chorus plus 42 variations.
```

Figure II: DB51XG specifications

adds a controller keyboard in the form of the Evolution MK149. This has 49 touch sensitive keys (4 octaves) which are the typical springy keys of home keyboards. It doesn't have any inbuilt sounds – the idea is that you play the sounds of the internal card after all! It also has pitch bend and modulation wheels, a volume slider with a LED display which allows you to send program change numbers, MIDI channel numbers and so forth.

Packs 2 and 3 also come with a CD which contains demonstration versions of the current MIDI software available for RISC OS machines and includes a selection of professional MIDI files which really show off the card, plus an HTML manual covering all of the sounds and effects available.

Also included on the CD is *Karelia 2*, which is an XG player and editor, allowing you to alter any aspect of your MIDI files. This is a development of the original software supplied by Q-Tec. The combination of free software and demos allows you to play with the different aspects of the card as well as evaluating the latest software.

In conclusion, if you are at all interested in music on a RiscStation these packs represent excellent value for money. Even if you already have a keyboard with a GM sound set, the extra sounds and quality offered by the XG card can make your pieces sound completely fresh. **END**

Product details

Product:	Pack 1 £15, Pack 2 £99, Pack 3 £199 (exc VAT & carriage)
Supplier:	RiscStation, 168 Elliott Street, Tyldesley, Manchester M29 8DS, UK
Tel:	(+44/0) 1942 797777
Fax:	(+44/0) 1942 797711
Web:	www.riscstation.co.uk
E-mail:	info@riscstation.co.uk

Free Ads

• Has anyone got an Irlam Instruments i16 sound sampler card they no longer need. Tel 01623 794385 or ashbury@ukgateway.net (will reply but spasmodic)

• A4000, 4MB, 80MB Hard drive, KEyboard, AKF18 Colour Monitor - £150; A3010 Keyboard 1MB - £20 Tel: 01933 626326 (Northants) after 6pm. Buyer collects

• For Sale: Sibelius 7 software (incl. manual, packaging etc..), also 100 Monotype Fonts. Offers?? Owen Leech, Bristol 0117 9239447, owenleech@hotmail.com

• FREE! 20 brand-new Imation high-density 5.25" disks. (For IBM computers only - NOT suitable for BBC micro). Just pay carriage (£1.50). Tel: Chris on 01570-470035.

• RiscPC 600 - 8MB +1MB RAM, 400MB IDE HD, ARM 610 Processor Card, PC Card, CD ROM, Acorn AFK60 Monitor. All for £270 or offers.Call Jim on (01572) 737 699 (Evenings) (Rutland, East Midlands).

• RPC700 13MB HD830 £200. A7000 8MB HD540 Fan £150. A5000 4MB HD170 £80. A4000 2MB HD80 £50. Taxan 770 £20. Also A540, A440/1/Arm3, A3000 plus accessories/software. Call/email for details mike@mhobbs.demon.co.uk 07710-348205 (Cambridge).

• RiscPC 700 with SA, 17Mb RAM, 1Mb VRAM, 1.2Gb Hard Drive, CD-ROM, Internal modem, Freeserve internet package, Midi card, Dumb keyboard, hand-held scanner and computer trolley. £650 ono. (Norwich) Fiona King, tel: 01953 605834 or e-mail: feeeee@hohs.freeserve.co.uk

• Wanted : A RiscPC ethernet card - any type considered!

• Risc PC 600: 8MB +1MB RAM, 400MB IDE HD, ARM 610 Processor Card, PC Card, CD ROM, Acorn AFK60 Monitor. All for £270 or offers. Call Jim on (01572) 737 699 (Evenings) (Rutland, East Midlands).

• RPC700 13MB HD830 £200. A7000 8MB HD540 Fan £150. A5000 4MB HD170 £80. A4000 2MB HD80 £50. Taxan 770 £20. Also A540, A440/1/Arm3, A3000 plus accessories/software. Call/email for details mike@mhobbs.demon.co.uk 07710-348205 (Cambridge).

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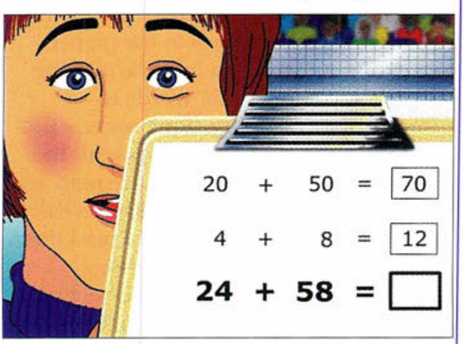


On your marks...

Mental Maths Olympics Year 4 and 5 are two more new titles coming from the Sherston stable this month. Designed by Simon Hosler and Lis Johnson the aim is to sharpen blunt mental maths skills.

The Mental Maths Olympics CDs each contain seven fun Olympic-style events that children can compete in; the quicker they answer the mental maths questions, the better they do! Teachers can choose which type of mental maths calculations to use and each event has its own personal coach who presents animated explanations of the most appropriate strategies for each type of calculation.

Both Mental Maths Olympics CDs have been designed to teach and practise the specific mental calculation strategies outlined in the National Numeracy Strategy Framework. The animated explanations of the strategies show exactly how they work and the sums presented to the children are carefully selected and graded to make sure they actually apply the appropriate strategy. A record-keeping section tracks all children's results, including last scores and best scores to motivate youngsters to improve their performance over time.





Each CD-ROM costs £49.95 and comes with classroom printed materials with photocopiable medal certificates and personal score booklets to encourage children to improve their 'mental maths' performance.

Also from Sherston are more talking stories to their collaboration with Oxford University Press. *Oxford Reading Tree Talking Stories, Stage 5* builds on the previous editions and is specifically designed for classroom use with simple interfaces, clear speech, highlighting text, amusing animations and comprehensive teacher controls.

In addition, each of the six trunk books included on the Stage 5 Talking Stories CD-ROM is accompanied by interactive Word, Sentence and Text level activities. The activities, which have been carefully designed with the National Literacy Strategy in mind, directly relate to each book's storyline and content. The cost is £40.

For more information contract Sherston on 01666 843200 or visit their Web site at **www.sherston.com**

Anglia update

More updates for Anglia Campus. Of particular interest, is *The Seed*. A seed grows up to become a tall tree, but who's that old lady, reading in its shade? You'll find out in the latest Big Book to arrive in Primary English at **www.angliacampus.com/login/pri/english/seed/index.htm**

Staying with English, things are getting damp and scary, but you can enjoy the rhythm of *The Storm*, a new poem for Key Stage 1 to be found at: **www.angliacampus.com/login/pri/english/?storm**

Taking weather from literacy to geography and Key Stage 3 and 4 is *Geography in the News 10*. Here you'll discover information on the floods that have devastated Mozambique, a country that had only recently begun to emerge from a long period of economic instability and civil war.

These pages will help students discover the causes and the consequences of the Mozambique floods at: **www.angliacampus.com/login/sec/geog/?gn010**

In brief

Web updates

More information this month on the SCRAN (Scottish Cultural Resources Access Network) Web project. This is a subscription Web site providing resources and access to information of Scottish origin and which links to Arts, Geography and History curriculum for the Scottish and National Curricula.

The first new addition is a project comprises 200 full data sets on reconstructions of prehistoric, Roman and Celtic structures, life and crafts, based on the on-going development programme at Archaeolink Prehistory Park in Aberdeenshire.

You can access this via **www.scran.ac.uk** or you could link to RE:SOURCE. This is a new cultural organisation which replaces the Museums & Galleries Commission (MGC) and Libraries & Information Commission (LIC). However, to ensure that MGC & LIC information remains readily available both Web sites will remain operational, though they will no longer be updated.

Get your address

So you've finished tweaking the school's HMTL and now want the world to admire your efforts, but what address should you give the creation?

All schools now have a domain name registered for them as part if the School Names on the Net project. You can find your address by contacting Nominet – free!

The domain names follow a standard format – the school's name following by the location with the suffix sch.uk You could take an educated guess to find a particular school or ring Nominet on 01865 332289.

Contacting AU

Pam Turnbull:
educ@acornuser.com

Sounds great

Pam Turnbull looks at pattern activities to supplement your Literacy Hour

The final two releases in this phase of the Oxford Literacy Web collaboration between Sherston and Oxford University Press, are Sound Activities and the Big A B C. Both follow the same style of graphics, interface and support features in Sound Stories - reviewed in the June issue of *Acorn User.* Aimed at Key Stage 1 literacy lessons, all three products are based on the *Letters, Sounds and Rhymes* strand of the *Oxford Literacy Web*.

Using the Sassoon font and a range of voices - from the cartoon guide Webster, the spider, giving instructions and advice, to the female voice sounding out the correct phonemes for letters and digraphs - Sound Activities divides into two sections.

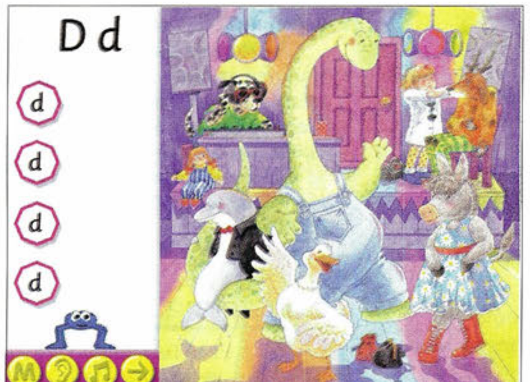
There are four activities in total which may seem a little on the light side considering the cost. However, I was impressed by the detail in the design and the built-in – and pretty much transparent – support for children who are struggling.

The main menu screen offers children *The Balloon* and *The Posting Games*. Both of these are listening games, while *The Rocket* and *The T-shirt Games* stresses spelling patterns.

If you don't want all the games on offer, you need to access the Teacher's Options screen by clicking on the T button. This allows you to customise the activities for an individual child. So much so that you can opt to use all the alphabet and digraphs, just the main alphabet or the teacher can specify certain letters/digraphs children are struggling with. Teachers can also decide whether you want coloured onsets. Progress can be tracked, however, you will have to have installed the program on the hard disc to use this feature. If you don't need this facility you can run the program from the CD-ROM.

Starting with the listening games, *The Balloon Game* provides children with a chance to practice recognising initial phonemes (or end phonemes when it comes to x) using a range of pictures. There are five images held within five balloons, three will match the target sound and all pupils have to do is click on the correct balloons. Once finished the wrong balloons will pop and the correct ones reappear with the initial letter or digraph trailing underneath attached to the string. Children play the game six times - although clicking on the M at any time will return them to the main menu. All finished and children are offered the chance to play again.

For a more challenging game you need to turn to *The Posting Game.* Here you are presented with three doors each showing a letter or digraph in the window. You also get a letter featuring a picture rather than an address. Children have to match picture and letter - six in all. Then the doors open to show the pictures you posted while the spider reinforces the lesson by highlighting and naming each one.



Moving on the spelling games, the first is *The Rocket Game*. Three rockets are poised for take-off and each sporting a letter. On their destination planet appears a picture and word which is missing its initial letter. The task is quite straightforward and if you click the correct rocket it flies to the planet dropping its cargo into the missing space. There are six words to complete and once done rockets pull across the skies the words with the same initial letter. These are read and highlighted by the spider, who then encourages the children to read them while he does the highlighting.

The second game in this section is *The T-Shirt Game*. Similar to the first, here a T-shirt has been designed with a picture in its centre, underneath is the name from which the initial letter has been torn off and children must discover which of the three possibles is correct. I particularly liked this game for how it uses digraphs: ss, ff, ll and so on. Complete words and pictures are displayed alongside and children can see that the same sounds are involved in these words. Then, as with *The Rocket Game*, these are read outloud and the children encouraged to read them themselves.

The icons are very straightforward and restricted to an ear, M and question mark. The M takes you



back to the main menu, while the ear lets you hear the instructions as many times as you want. Still struggling? Then clicking on the question mark launches the spider into giving you the sounds of the letters on screen and other information of what's on the screen. Make a mistake and the program automatically reveals these helpful remarks. The help has been well designed to provide a good balance of constructive criticism and explanation.

Of help to teachers is the manual with some suggestions on using the programs as a basis for whole class, individual and group work. It also suggests which groups of letters to choose initially and how these should be developed.

If a child has just made a clicking error with their mouse, they can correctly click and the explanation stops. With some of my children this meant that they just clicked indiscriminately getting the right answer as quickly as possible but without understanding the task. I like the fact that you can bypass explanations, but it would be nice if this was an option or bypassing has to be done with a keyboard key press rather than a mouse click.

The Big A B C is exactly what you'd expect from the title. Concentrating on the 26 letters of the alphabet and the four consonant digraphs - th, ch, sh, wh - as with the other titles. But here there are 30 alliterative rhyming songs as well as 120 activities; two listening and two spelling pattern activities for each letter. So this is more than just an interactive dictionary or word list.

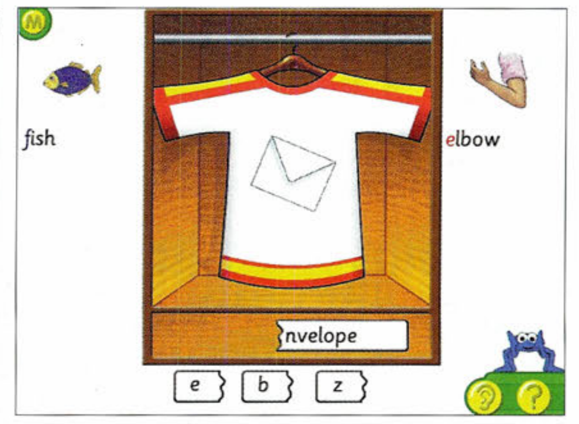
The main menu offers up the letters in lower case format - again teachers can customise volume, type and number of activities, letter case, letter name *and* sound, onset colour, auto help, automatic music as well as restricting the alphabet and digraphs available to children. Again reporting is available for those who install.

Make your choice and the letter, in the case you've chosen, appears and is introduced as "This letter makes the sound a. It is the letter a" although digraphs only appear as sounds. An alliterative ditty introduces the scene of an excellently detailed and interesting picture containing a large number of objects beginning with the target letter. Webster wants you to find four and for each one you choose an octagon is coloured in. My children went back to this again and again wanting to find all the matches and it led to much discussion about different words for similar objects.

Click the 'next' arrow and you'll move on a page to find the same picture with elements greyed out and another listening task awaiting you. The challenge is to click colour back into the ones with the target letter.

Next come the spelling games. The first of these asks you to label the object in the picture named by the spider. You have four to choose from each time and only one is correct. As with Sound Activities children are encouraged to read the words in the labels for themselves and not just to rely on Webster.

The final game again presents pupils with a labelling activity. Her it is in place on the picture,



however, someone has torn away the first letter/digraph - or end sound if you've chosen x - and mixed them up with three other torn off letters. Click on the right one and the word appears in full.

The graphics, sounds and presentation are excellent, activities have been well thought out, not too long to become boring and not too short to be meaningless. The three CD-ROMs in the series support each other extremely well, consolidating knowledge and requiring children to learn just one simple interface. Yet they work well separately whether you use ORT products or not. I hope this series will continue to be developed as it is bright and appealing to children, while it is easily integrated into the Literacy Hour even for children working independently.

END

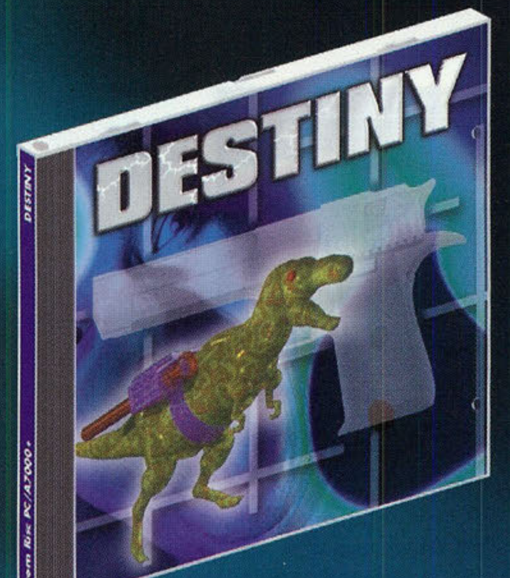
Product details

Product:	Sound Activities
Ages:	5-7
Price:	£35
Product:	Big A B C
Ages:	5-7
Price:	£35
Supplier:	Sherston Software, Angel House, Sherston, Malmesbury, Wiltshire SN16 0LH
Tel:	(+44/0) 01666 843200
Fax:	(+44/0) 01666 843216
Web:	www.sherston.com
E-mail:	sales@sherston.co.uk



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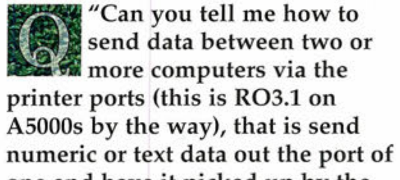


RISC OS



Mike Cook stops to sniff the flowers

Off to a quick start today because we've a great deal to get through and still the same old two pages. Mike Bailey has a hankering to write some multi-computer games:



"Can you tell me how to send data between two or more computers via the printer ports (this is RO3.1 on A5000s by the way), that is send numeric or text data out the port of one and have it picked up by the other.

"I've been trying to work it out for yonks by looking in the StrongHelp manuals, other peoples' programs, and a couple books I have, but to no avail. I have a very vague idea on the serial way as there appears to be more info on this but I've no serial cables.

"But I do though have an abundance of parallel cables and I really want to be able to do stuff like write network games and other net utilities, file transfer if possible and need to understand fully the process of printer port 'comms', so please help I'd be really grateful if you could tell me how to do it in BASIC, or what SWIs to use. I have just recently started to understand SWIs, and they're cool."

A: I'm sure you will be pleased to know that you don't need to use SWI calls at all. First off, you need to connect the two computers together with a suitable cable. Most cables are just one-to-one cables, that is pin one on both ends are connected together with the same going for all the other pins.

This arrangement will not work for you. You need what is known as a twisted cable. This has pin 1 connected to pin 10 and pin 17 connected to pin 11 (that's four twisted wires) and pins 2 - 9 connected to pins 2 - 9 (that's eight straight connections) plus pins 25 connected together. Then one computer pretends to be a printer while the other receives what the other is sending.

The printer port can be accessed directly from BASIC and looks just like a file, you can use all the normal file commands to transfer data between the two machines. On one machine you open the file for output and on the other for input:

```
FO%=OPENOUT"parallel:"
FI%=OPENIN"parallel:"
```

Then you can use the BPUT# and BGET# to transfer bytes or the PRINT# and INPUT# to transfer numbers and strings. One point here is that you must INPUT the same data type as you PRINT or it won't work. Also if you try to INPUT something and there is nothing waiting in the buffer then the computer will hang until something is sent.

To avoid this use the length of file function EXT# to see if something is in the buffer before trying to extract it. As one computer is receiving while the other is sending communication is only one way. However, you can arrange the software to swap the sender and receiver to allow two way communications, this is known as half-duplex working, the sort of computer equivalent of saying 'over' on a walkie-talkie.

You can't connect more than two computers like this because the printer handshaking lines are fixed to be inputs and outputs, they are not configurable. To connect more than two computers together you have to go for a network card in each.

If you want to write real network games – using network interface cards – you could use the version of Justin Fletcher's *JFShared* Basic library that contains support for sockets and network games.

Barrie Ellis is trying to breath new life into an old machine, he writes:

"I wonder if you can help me build a universal SCART lead for a BBC Micro. I'm trying to make some to go with a switch interface set-up I'm working on for people with severe disabilities. I'm trying to make it as small as possible as a lot of people have a limited amount of space to keep the machine in many living in small bungalows.

"I've removed the necessity of a disk-drive, by getting Chris Richardson to put the software (YES/NO, dice and a versatile number generator) on RFS

EPROMs, I'm using BBC B's as they are smaller than Masters, and now I'm trying to get rid of the CUB monitors, using the RGB out for a decent colour picture.**

"The SCART leads I've built work on some TVs but not all, but won't work on my Maplin extension lead, nor video recorders, though this is not so important, if I could get it to work on the 2- or 5-way extension leads and any TV. I've been told the use of a capacitor may help."



The problem with this is that not all TVs have RGB inputs on the SCART socket. It is a common misconception that a SCART socket equals an RGB input. That's why your lead will work on some TVs and not others. The TVs that have no RGB use composite video on pin 19 – you can get composite video out of the model B through a socket on the back but unfortunately it is only mono.

You can modify the computer to produce a colour composite signal and that does involve adding a capacitor. If you look on most of our past cover CDs you will see the old Acorn application notes, the last time they appeared was on AUCD8 in **Acorn.FTP.Documents.Appnotes**, that's Application Note 1. The only problem with adding a composite signal to the SCART is that some TVs then will use the composite signal instead of the RGB one.

It's the function switch on pin 8 that needs to be taken to +12 volts to indicate there is RGB present , this also might explain why it doesn't work on some TVs you have tested. Some sets will happily switch with just 5V to this pin but strictly speaking this voltage indicates the TV is to go into wide screen mode.

The problem here is that the SCART standard has been poorly or incompletely implemented on virtually all TV sets. I have covered this in the past in *Acorn Computing*, see BodyBuilding 86 (Oct. 90) "Connect your computer to a TV set using its SCART plug."

Anyway Barrie send me a reply:



"Thanks Mike, you've helped me make my mind up on what to do – I've recently been given the info on how to get a colour composite picture out of the BNC b/w output.

So I'll modify the BBC Micros I donate to either a colour signal to RCA TV input, use the RGB SCART where I know it will work, the ideal, or failing all that, give people a CUB Monitor, which are not exactly compact anymore."

Contacting AU

Mike Cook:
rambles@acornuser.com

This might be beginning to feel like a soap opera but Gareth is still struggling to understand how computers actually do arithmetic, here is a sample from a recent exchange of e-mails:



"I am still having trouble understanding the arithmetic of the computer. I do understand it a lot better than I did before. However, some things I still cannot get straight: To begin with, you said that, to the computer a positive number wouldn't be any different to a negative number. If this is the case, how does it subtract numbers, as it needs a negative number to be able to subtract, doesn't it?

"Finally, I am intrigued to know how the computer knows which bit in the binary figure represents which decimal number. It is true to say that the computer doesn't work with decimal numbers, but when it outputs the binary numbers on screen, as the result of running a program, it has to output them as decimal for us to understand."



When does a bit pattern represent a negative number and when is it an unsigned one? Answer whenever *you* want. It's all the same to the computer. Don't mix up the computer and the computer high level language. Don't confuse the sign of a number, positive or negative, with the operation, add or subtract.

To add up two bit-patterns the computer puts them through an adder circuit. To subtract two numbers the computer takes the 2's complement (invert all the bits then add 1) of the subtractand and then puts them through an adder circuit.

In this way it doesn't matter if the number you are subtracting (or adding) is positive or negative you will get the right result. Try doing this on paper with some examples numbers, use 4-bit numbers for ease.

The computer doesn't know about positive and negative numbers, the beauty of the 2's complement method of representing negative numbers is that the computer doesn't have to know.

So the binary 1101 can represent 13 if you interpret the bit pattern as a 4-bit unsigned number. However, as a 4-bit 2's complement number this same bit pattern stands for -3. The operation (say add) is the same no matter what interpretation you put on it. Remember a computer only handles bit patterns and not numbers. It's only when we want to manipulate numbers that we interpret bit patterns as numbers.

As for the other part of your question: The high level language PRINT statement contains a program that takes a bit pattern and produces an ASCII string which is the decimal representation of that bit pattern. It's only a bit of cosmetic manipulation, it doesn't actually mean anything, it's only when we see this string that we see it as a number.

One way (and it's only one way) of doing this would be to convert the bit pattern into a BCD bit pattern (Binary Coded Decimal) this is four bits representing each decimal digit of the number. This involves doing some BCD-based adding, that is adding up numbers four bits at a time and generating carries and roll-overs when this number exceeds nine.

The algorithm is a bit complex to describe here but it involves shifting and adding, most standard text books should explain this. To convert a BCD number into ASCII is simple, just add hex 30 to all the bits, remember ASCII &34 prints out as 4 and ASCII &32 prints out as 2 and so on. The exact relationship between the bit pattern and the number output depends on the way the language is representing numbers – which in Basic could be either 4-byte integers or 5-byte floating point numbers.



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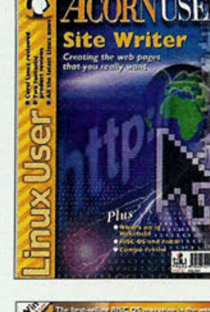
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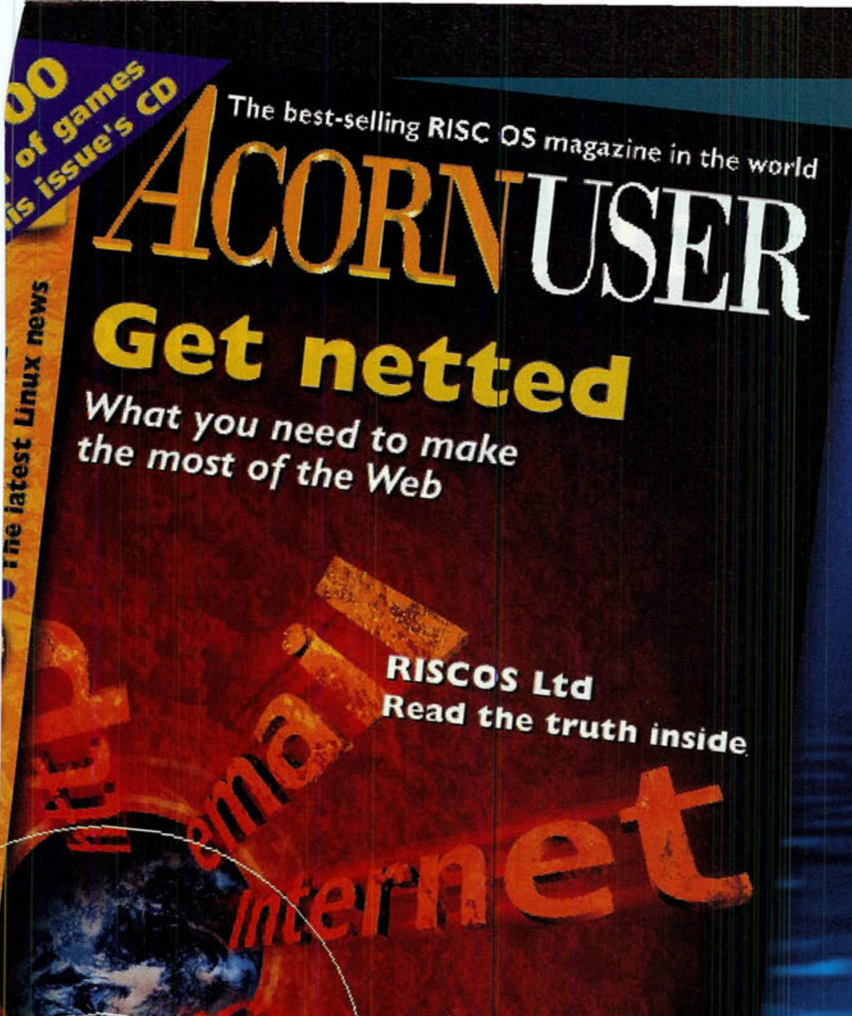
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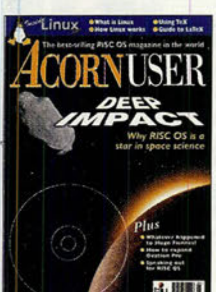


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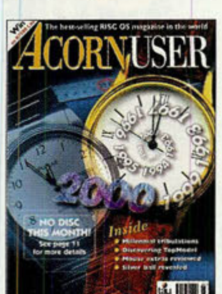
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Why can't t pro

One of the things which annoyed me most about Acorn (as was) was the fact that they would complete the software so that it looked about 95% done and leave the tidying up to the likes of developers and PD programmers. Acorn have gone and I'm glad to say that since upgrading to OS 4, it doesn't look like RISCOS Ltd have done the same.

It seems sad though that software writers have taken up this 95% approach. Take possibly the three best pieces of software available at the moment – *POPStar*, *Socketeer* and *StrongED* (these are representative – I could go on and on with examples). For those who are not technical, we are expected to place bits and pieces of the software in the *!Boot* structure and write our own configuration system. While this may not be daunting to experienced users, new users will be daunted by this.

How much extra effort would it take to see programmers adding little bits into their software to do this for us? I mean, would it take much more than 20 lines of code to ask the user for log-in details or install a part of itself into the boot? Not being a programmer, I could not say, but I doubt it would take very much to issue a *copy command and a few inputs.

Can I therefore make a plea to all PD/Shareware/Commercial programmers, think down a notch or two and include an installer.

Bethany Richards
by e-mail

Matthew Sackman replies on this and other related issues: Installers are only of benefit when they work. The major problem is that due to a variety of !Boot *sequences in circulation, there are no hard-and-fast rules and no guarantees that an installer would place the files in the correct place for your system. Therefore most programmers assume that a user is capable of knowing how their own system works and how to configure it.*

Due to the intuitive nature of RISC OS, it is extremely easy to learn how to use. Any major features (such as the 'Menu on the Middle Mouse button') are implemented as a standard throughout the OS and programs are written to be integral to this.

As a result, the gap in knowledge base between programmers and users is huge: Programmers must slog through several thousand pages of PRMs and then any further guides they need to read; then they actually sit down, think and design their application; and then they write it. Thus the programmer knows the exact code for every feature in their application intrinsically and so it is very easy to think, as a programmer, that all users out there would find this particular feature equally easy to use and understand.

Documentation is often considered as the boring bit of programming and in many cases, unless one takes great effort and puts pride in achieving a clear and concise manual, it will turn out a dog's dinner! It is very easy to get bored writing a manual and then wander off and add a couple of extra features to

Game problem

I was wondering if you could help me with a game I have, the game is Premier Manager which I am running on an A3010 1MB machine. While playing the game it will crash with an error message of (Fatal error Type=5), this error is not listed in the reference manual.

The game is by Gremlin Interactive which were bought by the French software group Infogrammes so I have not been able to get any information from them as to the cause of the bug.

I have looked around for information on the internet as to what this is, some people say it's an error which is only generated by a program written in C, is this true and if so is there any bug fixes.

Other people said it was the program trying to access a memory location that it didn't have access to and that there isn't anyway of fixing this. The correct information would be much appreciated.

Andrew Simpson
by e-mail



...ese damned ...grammers...

your programme – anything to get out of having to write the manual!

Installers are slightly different: I once issued an update patch as a directory of files and instructions on what to do. Around 1 in 10 users got it right first time; although the instructions were clear to me, they obviously weren't to others. Since then I have always included an installer that searches for previous versions and updates them as necessary.

I would therefore suggest that programmers are not the most suitable people to write manuals at all. A programmer will understand his programme on a fundamental level and will never cause his own programme to crash as he knows exactly how to use it.

This level of understanding is not required by users and I would imagine that a better manual would result from great collaboration between the programmer and a few core beta-tester type users. This does take time, but is ultimately beneficial as it often prompts removal of some useless features, the addition of new ones, and an application that is both easier to use and more useful.

Help my world

I have been receiving your mag for a number of years and just wish to say thank you for carrying on when things got tough. Enough said!

I am a parent governor and ICT co-ordinator at a primary school and have a couple of Acorns at home. My wife is a teacher also at the school and uses Acorns in her class – likewise for the rest of the Key Stage 1. With her imput and my love of *Draw* and *MyWorld*, we have developed many sets of My World screens which are now used across the KS1 classes.

These include Arrow Numbers, Numberlines, Numbers Sets, Sentence (1st 45 words), Long Vowels, Initial Sounds, Rhyme and a topic based – The Sea. I have also produced a simple geography set of screens for the Isle of Wight which enables the children to visit their classroom from a school plan.

I have been told that it is possible for these screens to be transferred successfully to a PC and, as our KS2 classes have a meagre range of *MyWorld* screens to use, I am interested in trying to transfer some of my screens over. Is it at all possible to run an article on this or feed this letter out to the Acorn world for help. It is interesting that *MyWorld* has been accepted by the PC world as an original brilliant educational concept that they even wish to copy it.

In response to Graham Wootten's letter, (June 2000), DK did indeed have Acorn converters for their CD-ROMs produced by IMS, now Interconnex; I have one for 'The Way Things Work' CD-ROM. A PC to Acorn reader is used.

Dave Bryant
jadabry@supanet.com

Viewpoint

As someone who only recently joined the RISC OS world as the MD of Tau Press, I have come to appreciate the good and bad points of this market. But I was horrified to discover that some so-called members of the the RISC OS community had been falsely rumour-mongering and that this had found its way onto the Internet as a kind of Sun-style "reporting".

Perhaps those concerned should think more about the kind of damage they can cause that affects the livelihood of people, the RISC OS market and even the UK in general. As opposed to puffing up their own petty pride and self-importance.

Who knows what possesses people to behave in such an unthinking manner – luckily they are only the few, and we are the many.

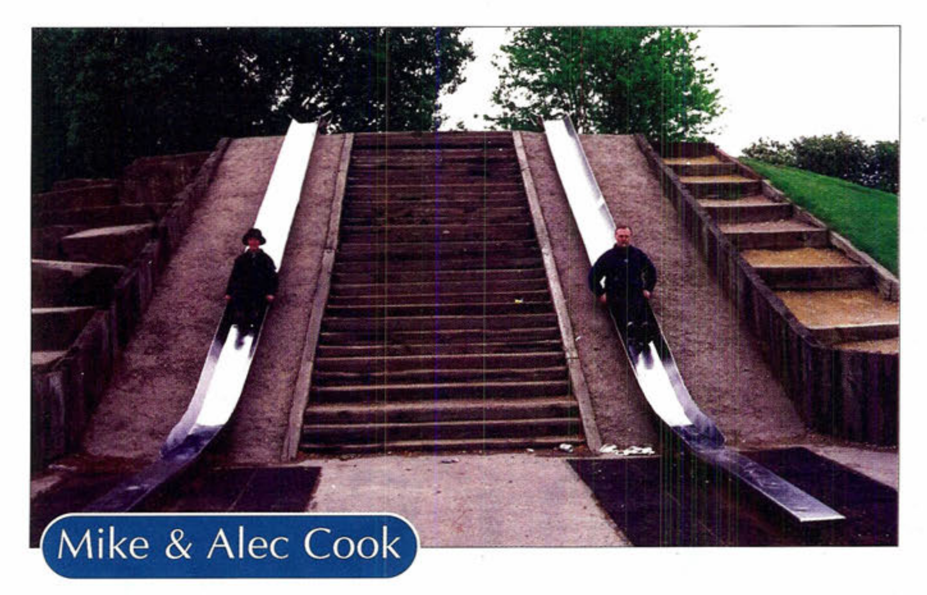
Let's not forget that this market has a lot to offer, and most of the people here want it to succeed – so don't listen to the negatives. Let's talk positive and get pro-active.

Sharon Henderson

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Mike & Alec Cook

Mike and Alec Cook were virtually the first people I saw at the show. Seeing them on the *Acorn User* stand, I thought 'Oh look, its Dr Evil and Mini Me!' Just in case Mike Cook needs further introduction, he writes Rambles and Run the Risc every month in *Acorn User*.

> I do rock and roll, and Wendy does the fanzine

Mike (who likes 'hill walking' in Switzerland and would quite like to hang glide except that he's petrified of heights) is the only person I've met who could successfully continue *Home Truths* if John Peel were ever to hang up his slippers.

'I was writing on the wall of my cave and someone said this could be a good idea,' jokes Mike about his first experiences with Acorn machines. 'I got an Acorn Atom at work – Manchester Poly as it was then. In those days you could buy Acorn computers in kits and we were designing a course to show teachers how to make an Acorn Atom and then teach them how to "use" it. But the academic powers that be decided that teachers were not clever enough to do this and did not let us run the course. In the end we actually ran the course for members of the general public.

'I got 25 computers working before the Christmas of the first term. Some of them worked first time; most of them did not, and I did it by working late. When the BBC Model A came out I built a few of those, and did conversions to Model Bs.'

'Ever since I can remember,' Alec adds, 'I had a deprived childhood sitting programming Basic on a BBC at the age of three years old. I have been using computers ever since, and I kind of got into music, and now I am off to university to do music technology with computers and stuff at Leeds Met.'

Mike and Alec are father and son, but it's hard to believe that when you meet them; there seems no age difference when you talk to them and their relationship seems that of best mates, of equals. They are both heavily into music. It came as no surprise to find out that Mike used to play folk guitar – with that beard what else could have he have played?

'But I did not have a beard then!' protests Mike.

Alec adds: 'I am in two bands: my college band which is more jazz-based and a rock band. Well I *might* be in a rock band, I might have left. The last gig I played was supporting JJ72, and the week after JJ72 were supporting Brace at Blackpool, so you know it is only step away from supporting Brace.'

'I do rock and roll; Wendy my wife does a music fanzine,' says Mike. 'I help a little and so do several students and it is called *This is not TV*. It's sort of done on a Risc PC.'

'I listened to folk in the 60s, got married in the 70s, had children in the 80s. In the mid-nineties I started to listen to music again. You forget about music and you think it is all rubbish, but when Alec started getting into it, I thought "this is all right". I liked Radiohead, a little of brit pop but, significantly, not dad rock.'

Alec now knows lots of bands thanks to his mum who has a habit of waltzing backstage past all the security guards who never stop her because they think she is the band's mum. He has stories about hanging out with Travis, Placebo and Radiohead, and the first time he got drunk, Martin Karr from The Boo Radleys was buying the beer.

'My hangover lasted a week,' explained Alec. 'But we have run out of up-and-coming good bands. We are now into unsigned bands on the cusp of being signed or dropping into obscurity – indie rock is a very small world.'

Mike currently designs set-top boxes for Pace, having been a physics lecturer at MMU and an electronic engineer. A teacher put him in touch with an 'unknown' magazine and Mike offered to write a two-part article on converting Model As to Bs and a couple of others on interfacing things ... over 200 of these later and Mike is still going strong.

'The first time I did copy, Alec had just learnt to walk. He is going to university this year. RISC OS machines are great; they are stable, easy to use and have small footprints. They are very easy to program and you can get them to do just what you want them to do. In my case, I basically want to mess about with interfaces and electronics'.

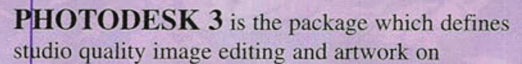
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